NEIKKURI EXAMINATION IN THAMARAGA NOI / IRUTHU ROGAM
A CONDITION OF CARDIAC DISEASES
(ISCHEMIC HEART DISEASE)

Dissertation submitted to

THE TAMILNADU Dr. M.G.R MEDICAL UNIVERSITY

CHENNAI – 32.

For the partial fulfillment of the degree

DOCTOR OF MEDICINE

(Siddha)

by

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October - 2019

DECLARATION BY THE CANDIDATE

I hereby declare that this Dissertation entitled **"*NEIKKURI EXAMINATION IN THAMARAGA NOI / IRUTHU ROGAM" A CONDITION OF CARDIAC DISEASES (ISCHEMIC HEART DISEASE)*** is a bonafide and genuine research work carried out by me under the guidance of **Dr. M. RAMAMURTHY, M.D (s), Ph.D, Lecturer,** Dept of Noi Naadal, National Institute of Siddha, Chennai – 47, and the dissertation has not formed the basis for the award of any degree, Diploma, Fellowship or other similar title.

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BONAFIDE CERTIFICATE

Certified that I have gone through the dissertation submitted by **Dr.T.Geetha, (Reg.No: 321615203)** a student of final year M.D(s), Branch-V, Department of Noi Naadal, National Institute of Siddha, Tambaram Sanatorium, Chennai - 47, and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

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ACKNOWLEDGEMENT

This dissertation is one of the milestones in the journey of my professional carrier as it is the key program in acquiring my MD (SIDDHA) degree. Thus, I came across this task which was completed with the support and encouragement of numerous people. So, I take great pleasure in thanking all the people who made this dissertation study a valuable and successful one, which I owe to treasure it.

I feel enormous wonder and colossal gratitude in my heart of hearts to GOD and SIDDHARS Almighty for making this dissertation have its present form.

I express my sincere thanks to the **Vice-Chancellor**, The Tamil Nadu Dr.M.G.R Medical University, Chennai-32.

I express my profound sense of gratitude to **Prof. Dr. N. J. Muthukumar M.D(s),** Director, National Institute of Siddha, Chennai-47.

I express my profound sense of gratitude to **Prof. Dr. V. Banumathi M.D(s),** Former Director, National Institute of Siddha, Chennai-47.

I take this opportunity to express my profound gratitude and deep regards to my HOD, Professor, **Dr. G. J. Christian M.D(s), Ph.d,** Department of Noi Naadal, National Institute of Siddha, Chennai-47, for his excellent guidance, monitoring, constant encouragement and guidance given by him time to time throughout the course of this dissertation.

I express my sincere thanks to **Dr. S. Elansekaran M.D(s), Ph.d,** Associate Professor, Department of Noi Naadal, NIS, chennai-47 for his valuable suggestions, hopeful support and encouragement of my whole study.

I express my sincere thanks to my guide **Dr. M. Ramamurthy M.D(s), Ph.D,** Lecturer, Department of Noi Naadal, NIS,Chennai-47, for his suggestions, hopeful support and encouragement of my whole study.

I express my sincere thanks to **Dr. V. Srinivasan M.D(s),** Lecturer, Department of Noi Naadal, NIS,Chennai-47, for his suggestions, hopeful support and encouragement of my whole study.

I express my sincere thanks to Chairman and Members of Institutional Ethics Committee (IEC), National Institute of Siddha, Chennai-47, for their directions.

I express my sincere thanks to Mr. **M. Subramanian M.Sc.,** (Statistics) Former Senior Research Officer, National Institute of Siddha, Chennai-47.

I express my gratitude to All my Colleagues, my seniors and my Juniors for lending their helping hands whenever needed during the course of the study.

I express my thanks to each and every faculty of NIS, Library staff and Lab staff.

Last but not the least, I would like to pay high regards to all my family members, my Father **Mr. S. Thambiraj**, my mother **Mrs. T. Ponni**, my sister **Ms. T. Geerthy** for their sincere encouragement and inspiration throughout my research work and lifting me uphill this phase of life. I owe everything to them. Besides this, I thank all those who have knowingly and unknowingly helped me in the successful completion of this project.

1. INTRODUCTION

'Thalankatti Indha Sadamana Iymbootham'

-Thirumoolar

The Sages, founders of Siddha System of medicine consider world and human being living in it are made up of five elements called '*Panchaboothas'*. The Panchaboothas as the name indicates, it comprises of five elements as follows - *Space, Air, Fire,Water* and *Earth.* Among *Panchaboothas,* three is essential in making human body and they are *Air, Water, Fire*. The stableness of health in human beings depends upon the nature of proportion of above three humours. The equilibrium of these humours when subjected to disturbance, one is likely to contract diseases.

The portrayance of "*Pinithanmai*"[1] and "*Pinithiran*"[1] by Siddhars insisted the importance in knowing the pathology of the diseases. Siddhars classified diseases under three main categories such as *Vatha diseases, Pitha diseases and kabha diseases.* The ailments can be diagnosed with "*Piniyarimuraimai"*[1]which containsEnnvagaithervu (eight fold examination) an important tool such as *Naadi, Sparisam, Naa, Niram, Mozhi, Vizhi, Malam* and*Moothiram.*

Siruneer Parisothanai (Urine examination) elucidated by Sage Theraiyar has been considered noteworthy in diagnosing the ailment next only to Naadi examination. Siruneer Paritchai will be performed in two ways – *Neerkuri* and *Neikkuri*. Neerkuri which commonly dealt with physical characteristics of urine and is headed under five domains such as *Niram (Colour), Nurai (Froth), Manam (Odour), Nirai (Specific gravity)* and *Enjal (Deposits).* Neikkuri[2] (*Oil on Urine Sign)* is conducted with a drop of gingely oil instilled over the urine surface and noted for the results.

The *Neikkuri* results show either the spreading pattern or the non spreading nature of the instilled oil drop staying as such. The individual patterns obtained according to disease affected. It is stated, Vatha diseased urine shows pattern of Serpentine fashion, Pitha diseased sample shows appearance of Ring and Kabha diseased results in Pearl formation. The Occurrence of these shapes are based on variations in surface tension and specific gravity of urine.

Blood, "The Fountain of Life" fuels the body and the "Heart" is indispensable for sustaining that fountain(blood). It is such a vital organ which supplies blood throughout the body. This study winds around the diseased heart and its manifestation in

urine which were documented and analysed. Cardiovascular diseases (CVD) are one among the major causes of death. It is rapidly evoling and twice as many deaths from CVD now occur in developing countries. It also indulge in economical status of the society as it affects working age group most commonly. In Siddha literature, *Cardiac ailments* is described by many terminologies such as *Thamaragavayu, Maarbunoi, Iruthayanoi, Rudhrarogam, Rudravayu, Iruthurogam*. It is classified into five types: *Vali thamaraga noi, Azhal thamaraga noi, Iyya thamaraga noi, Mukuttra thamaraga noi* and *Puzhu thamaraga noi.*[3]

To narrow down in the cardiac diseases spectrum, this study has been pointed around *Ischemic Heart Diseases* (IHD). IHD is a condition in which there is an inadequate supply of blood and oxygen to a portion of myocardium. Atherosclerotic disease of an epicardial coronary artery is the most common cause of Myocardial Ischemia.In United states, it is estimated that 13 million person have IHD, > 6 million have Angina Pectoris and > 7 million have sustained a myocardial infarction. Obesity, Insulin resistance, Type 2 DM are the major risk factors of the disease. IHD, a non communicable disease is getting more prevalant as of everyone getting adapted to western diet. Men population are more prone to IHD especially in South Asian countries like India and Middle East. It is also estimated that IHD is likely to become the common cause of death worldwide by 2020.

Though the diagnosis of IHD can be made from history and physical examination, there are some laboratory investigations to confirm it. The suspected individual with IHD (Features expressing IHD in ECG) will then allowed to go for ECHO or Treadmill test. Another invasive procedure called Coronary Angiography is used to detect coronary occlusion. It is indicated in patients where non invasive procedures gives negative results but still symptoms persists. Also this procedure can be used to exclude coronary occlusion. Though Coronary Angiography is the gold standard test for identifying the presence and extent of atherosclerotic coronary artery disease, it also have some risk development during the procedure.[4]

This study aims to document the diagnostic patterns of Neikkuri for IHD, which may provide a clue for identification of deranged humours in the above disease through *Neikkuri* examination, if successfully established. This study offers greater advantages of diagnosing the deranged humour in IHD as this is a non invasive and cost effective tool.

2. AIM AND OBJECTIVES

AIM

To establish a Neikkuri diagnostic tool for *Thamaraga Noi* (Ischemic Heart Disease).

OBJECTIVES

- PRIMARY OBJECTIVES

  To document the patterns of Neikkuri in *Thamaraga Noi* (Ischemic Heart Disease).

- SECONDARY OBJECTIVES

  To observe for any significant in Neikkuri pattern which may provide a clue in the diagnosis, prognosis or its complications.

3. A. SUGARANA NILAI (PHYSIOLOGY) IN SIDDHA MEDICINE

The human body is well connected with nature. The five basic elements, namely Mann (Earth), Neer (Water), Thee (Fire), Kaal (Air) and Aagayam (Space) are the building blocks of all the physical and subtle bodies existing in this whole universe.

தேகம் பஞ்சபூதம்

“பாரப்பா பூதமைந்து மண்நீர் தேயு
பரிவாயு வாகாய மைந்தி னாலே
சேரப்பா சடமாச்சு மண்ணின் கூறு
செறிமயிர்தோல் என்பிறைச்சி நரம்பைந் தாகும்
நேரப்பா அப்புவின்கூ றுதிர மச்சை
நீர்முளை சுக்கில மோடைந் தாகும்
காரப்பா தேயுக்கூறு பயமாங் காரங்
கடுஞ்சோம்பல் நித்திரைமை துனங்க ளஞ்சே
அஞ்சான வாயுவின் கூறு யிருத்த லோடல்
அவைநடத்தல் கிடத்தலுட னிருத்தலஞ்சாம்
அஞ்சாகு மாகாயக் கூறு காம
அதிற்குரோதம் உலோபமாக மதமஞ் சாகும்.”

- சதக நாடி..

These five elements altogether constitute the human body and also the origin of other materialised objects, explained as Pancheekaranam (Mutual Intra Inclusion). None of these elements could act independently by themselves. They could act only in co-ordination with other four elements. All the living creatures and the non-living things are made up of these five basic elements.

உலகம் பஞ்சபூதம்

நிலம் நீர்தீவளி விசும்போடைந்தும்
கலந்தமயக் கமுலகம் மாதலின்.

- தொல்காப்பியம்.

By the above verses it comes to know that the world and its living being are made up of *Panchaboothas.*

A.THE 96 BASIC PRINCIPLES (96 THATHUVAM):

According to Siddha system of medicine, 'Thathuvam' is considered as a science that deals with basic functions of the human body. Siddhars described 96 principles as thebasic constituents of human body that include physical, physiological, psychological andintellectual components of an individual. These 96 Thathuvams are considered to be thecause and effect of our physical and mental well-being. The Thathuvam is the author ofthe conception of human embryo on which the theory of medicine is based.

1. BOOTHAM – 5 (ELEMENTS):

- Mann - Earth
- Neer - WaterThee - Fire
- Vaayu - Air
- Aagayam - Space

2. PORI -5 (SENSORY ORGANS):

- Mookku (Nose) - It is a component of *Mann bootham*
- Naakku (Tongue) - It is a component of *Neer bootham*
- Kan (Eye) - It is a component of *Thee bootham*
- Thol (Skin) - It is a component of *Vaayu bootham*
- Kadhu (Ear) - It is a component of *Aagayam bootham*

3. PULAN -5 (FUNCTIONS OF SENSORY ORGANS):

- Nugarthal - Smell : It is a component of *Mann bootham*
- Suvaithal - Taste : It is a component of *Neer bootham*
- Paarthal - Vision : It is a component of *Thee bootham*
- Thoduthal - Touch : It is a component of *Vaayu bootham*
- Kettal - Hearing : It is a component of *Aagayam bootham*

4. KANMENTHIRIYAM – 5 (MOTOR ORGANS) AND KANMAVIDAYAM

- Vaai(Mouth) – Vasanam - Vaaku - The speech occur in relation with Space element
- Kaal (Leg) - kamanam- Paadham -The walking take place in relation with Air element

- Kai (Hands) – Dhaanam – Paani - Giving and taking are carried out with Fire element
- Eruvai (Rectum) – Visarkam- Paayuru -The excreta is removed in association with Water element
- Karuvai (Genital organ) – Aanandham – Ubastham - Sexual acts are carried out in association with Earth element

5. KARANAM – 4 (INTELLECTUAL FACULTIES)

- Manam – Thinking about a thing
- Bhuddhi – Deep thinking or analysing of the thought
- Siddham – Determination to achieve it
- Agankaaram – Achieving instinct

6. ARIVU – 1 (WISDOM OF SELF REALIZATION)

- To analyse good and bad.

7. NAADI -10 (Channels of Life Force responsible for the Dynamics of Life energy)

- Idakalai – Starts from the right big toe and ends at the left nostril.
- Pinkalai – Starts from the left big toe and ends at the right nostril.
- Suzhumunai – Starts from moolaathaaram & extend upto centre of head.
- Siguvai – Located at the root of tongue, helps in swallowing food.
- Purudan – Located in right eye.
- Kanthari – Located in left eye.
- Aththi – Located in right ear.
- Alambudai – Located in left ear.
- Sangini – Located in genital organs.
- Gugu – Located in anorectal region.

8. VAAYU – 10 (Vital nerve force which is responsible for all kinds of movements**)**

- **PRANAN (UYIR KAAL):**

  This is responsible for the respiration of the tissues, controlling knowledge, mind and five sense organs and digestion of the food taken in.

- **ABANAN (KEEL NOKKU KAAL):**

  It lies below the umbilicus. It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation, child birth.

- **VIYANAN (PARAVU KAAL):**

  This is responsible for the motor and sensory functions of the entire body and the distribution of nutrients to various tissues.

- **UTHANAN (MEL NOKKU KAAL):**

  It originates at utharakini. It is responsible for digestion, absorption and distribution of food. It is responsible for all the upward movements.

- **SAMANAN (NADUKKAL) :**

  This is responsible for the neutralization of the other 4 valis, i.e. Pranan, Abanan, Viyanan and Uthanan. Moreover it is responsible for the nutrients and water balance of the body.

- **NAAGAN:**

  It is a driving force of eye balls and responsible for their movements.

- **KOORMAN:**

  It is responsible for the opening and closing of the eyelids and also vision. It is responsible for yawning.

- **KIRUKARAN:**

  It is responsible for the salivation of the tongue and also nasal secretion. Responsible for cough and sneezing and induces hunger.

- **DEVATHATHAN:**

  This aggravates the emotional disturbances like anger, lust and frustration etc. As emotional disturbance influence to a great extent the physiological activities, it is responsible for the emotional upsets.

- **DHANANCHEYAN:**

  Expelled after 3 days of death by bursting out of the cranium. It is responsible for edema, plethora and abnormal swellings in the body in the pathological state.

9. ASAYAM – 5 (VISCERAL CAVITIES):

- **Amarvasayam** (Reservoir organ): Stomach (digestive organ). It lodges the ingested food.

- **Pakirvasayam** (Digestive site): Small intestine. The digestion of food, separation and absorption of saaram from the digested food are done by this asayam.
- **Salavasayam** (Excretory organ for the liquid waste): Urinary bladder, kidney. Responsible for the formation and excretion of urine.
- **Malavasayam** (Excretory organ for the solid waste): Large Intestine, especially rectum. Responsible for the expulsion of undigested food parts and flatus.
- **Sukkilavasayam** (Genital organs): Place for the formation and growth of the sperm and ovum.

10. KOSAM – 5 (FIVE STATES OF THE HUMAN BODY OR SHEALTH):

- **Annamaya Kosam** – physical Sheath (Gastro intestinal system)
- **Prnamaya Kosam** – Respiratory Sheath (Respiratory system)
- **Manomaya Kosam** – Mental Sheath (Cardio vascular system)
- **Vignanamaya Kosam** – Intellectual Sheath (Nervous system)
- **Anandhamaya Kosam** – Blissful Sheath (Reproductive system)

11. AATHARAM – 6 (STATIONS OF SOUL):

- **MOOLADHARAM :**

  Situated at the base of the spinal column between genital organ and anal orifice. Letter "ஓம்" is inscribed.

- **SWATHITANAM :**

  Located 2 finger breadths above the Mooladharam, (i.e) between genital and naval region. Letter "நா" is inscribed. Earth element attributed to this region.

- **MANIPOORAGAM :**

  Located 8 finger breadths above the Swathitanam, (i.e) at the naval center. Letter "மா" is inscribed. Element is Water.

- **ANAKATHAM :**

  Located 10 finger breadths above Manipooragam, (i.e) location of heart. Letter "சி" is inscribed. Element is Fire.

- **VISUTHI :**

  Located 10 finger breadths above the Anakatham (i.e) located in throat. Letter "வா" is inscribed. Element is Air.

- **AAKINAI :**

  Located between two eyebrows. Element is Space. Letter "ய" is inscribed.

12. MANDALAM- 3 (REGIONS):

- **Thee Mandalam** (Agni Mandalam) Fire zone

  Fire Region, found 2 fingers width above the Mooladharam.

- **Gnayiru Mandalam** (Soorya Mandalam) Solar zone

  Solar Region, located with 4 fingers width above the umbilicus.

- **Thingal Mandalam**(Chandra Mandalam) Lunar zone

  Lunar Region, located at the center of two eye brows.

13. MALAM – 3 (THREE IMPURITIES OF THE SOUL)

- **AANAVAM :**

  This act masks clarity of thought, knowing the power of the soul, yielding to the Egocentric consciousness like 'I' and 'Mine' considering everything is to be his own.(Greediness)

- **MAYAI :**

  Claiming ownership of the property of someone else and inviting troubles.

- **KANMAM :**

  Goes in collusion with the other two and responsible for incurring paavam (the Sin) and Punniyam (virtuous deed/Sanctity)

14. THODAM – 3 (THREE HUMOURS):

- **VALI (VATHAM)**

  It is a creative force, formed by Vaayu & Aakaya bootham.

- **AZHAL (PITHAM)**

  It is a protective force, formed by Thee bootham

- **IYYAM (KABAM)**

  It is a destructive force, formed by Mann & Neer bootham

15. EADANAI - 3 (PHYSICAL BINDINGS) :

Materialistic affinity Sibbling / Familial bonding

- **Porul patru -** Material Bonding
- **Puthalvar patru -** Offspring Bonding
- **Ulaga patru -** Worldly Bonding

16. GUNAM – 3 (THREE COSMIC QUALITIES) :

- **Sathuva Gunam (*Characters of Renunciation or Ascetic Virtues*) :**

  The grace, control of sense, wisdom, penance, generosity, excellence, silence and truthfulness are the qualities attributed to their benevolent trait.

- **Raso Gunam (*Characters of Ruler*) :**

  Enthusiasm, wisdom, valour, virtue/penance offering gift, art of learning and listening are the 8 traits.

- **Thamo Gunam (*Carnal and Immoral Characters*) :**

  Immortality, lust, killing laziness, violation of justice, gluttonousness, falsehood, forgetfulness and fraudulence etc.

17. VINAI – 2 (ACTS) :

- **Nalvinai -** Good Acts (Meritorious acts)
- **Theevinai -** Bad Acts (Deleterious acts)

18. RAGAM – 8 (THE EIGHT PASSIONS) :

- **Kaamam** - Desire
- **Kurotham** - Hatred
- **Ulobam** - Stingy
- **Moham** - Lust (Intense or Sexual desire, infatuation)
- **Matham** - Pride (The feeling of respect towards one's self)
- **Marcharyam** - Internal conflict, Envy
- **Idumbai** - Mockery
- **Agankaaram** - Ego

19. AVATHAI – 5 (FIVE STATES OF CONSCIOUSNESS) :

- **NINAIVU-AWAKENED STATE *(Sakkiram)***

  This state exists between the eye-brows. The four strengths, the five senses,the five actions *(Asayam)* and the four *Andhakaranas* are active in this state.

- **KANAVU- Dream state *(Swappanam)***

  Dream state is one in which the five senses and five actions lie dormant at Adam's apple (Throat).

- **URAKKAM- Sleeping state *(Suzhuthi)***

  This is the state in which the Anthakaranas are associated with the soul but these could not be expressed to others and its seat being thorax.

- **PERURAKKAM- Deep sleep *(Turiyam)***

  The seevathma, along with wisdom lies at the navel region, here respiration takes place.

- **UYIRPADAKKAM- Immersed state of seevathma *(Turiyatheetham)***

  The seevathma deeply immersed in the moolathara without the awareness of impurity (malam), sloth (Mantham), delusion (maya) andother sense of touch.

THE UYIR THATHUKKAL :

The physiological units of the Human body are Vali (Vatham), Azhal (Pitham) andIyyam (Kabam). They are also formed by the combination of the fiveelements.

Vatham = Vali+Aagayam : Creative force

Pitham = Thee : Force of preservation

Kabam = Mann+Neer : Destructive force

As per the above lines the Universe and the human body are made of five elements. If these three humours are in the ratio 1:½:¼ in equilibrium or in normal condition, then they are called as the Life forces.

SITES OF UYIR THATHUKKAL :

"பொங்கிய தைந்துக்குள் பொல்லாதது இம் மூன்றும்தான்
தங்கிய வாயு சமத்தன் மகாவாதம்
பங்கிய வன்னியால் பகுந்தது பித்தமே
பகுந்த சலத்தில் பரிசிக்கும் நல்லையும்

வகுந்த இம்மூன்றால் வளர்ந்தது நோயெல்லாம்
அகுந்தது தானறிந்து அளவிட்ட யோகிகள்
மகிழ்ந்தே யிதில் நின்ற மயக்கம் அறிவாறே."

- பதிணென் சித்தர் நாடி சாஸ்திரம்.

THE FORMATION OF UYIR THATHUKKAL

மூவகை நாடியும் உயிர் தாதுவும்

"தாது முறையே தனிஇடை வாதமாம்
போதுறு பின்கலை புகன்றது பித்தமாம்
மாது சுழுமுனை வழங்கிடும் ஐயமாம்
ஓது முறை பார்த்து உணர்ந்தவர் சித்தரே."

- பதிணென் சித்தர் நாடி சாஸ்திரம்.

மூவகை வாயுவும் உயிர் தாதுவும்

"உணர்ந்த அபானன் உறும் அந்த வாதத்தில்
புணர்ந்த பிராணன் புகும் அந்தப் பித்தத்தில்
அணைந்த சமானன் அடங்கும் கபத்தோடு
இணைந்திவை மூன்றுக்கு எடுத்த குறி ஒன்றே."

- பதிணென் சித்தர் நாடி சாஸ்திரம்.

Vali = Abanan + Idagalai
Azhal = Piranan + Pinkalai
Iyyam = Samanan + Suzhumunai.

I.VALI (VATHAM) :

a) THE NATURE OF VALI :

Vali is soft, fine and the temperature (coolness and hotness) could be felt by touch.

b) SITES OF VALI :

"நெளிந்திட்ட வாதமபானத்தைப் பற்றி
நிறைந்திடையைச் சேர்ந்துந்திக் கீழே நின்று
குளிந்திட்ட மூலமதூ டெழுந்து காமக்

கொடியிடையைப் பற்றியெழுங் குணத்தைப் பாரே
நிணமான பொருத்திடமும் ரோமக் காலும்
நிறைவாகி மாங்கிசமெல் லாம்பரந்து.”

- வைத்திய சதகம்.

According to Vaithiya sathakam, vali dwells in the following places: They are Idakalai, abanan, Umbilicus, rectum, faecal matters, abdomen, anus, bones, hip joint, navel plexus, joints, hair follicle and muscles.

“அறிந்திடும் வாத மடங்கு மலத்தினில்”

- திருமூலர்.

“நாமென்ற வாதத்துக் கிருப்பிடமே கேளாய்
நாபிக்குக் கீழென்று நவில லாகும்”

- யூகி முனிவர்.

According to Sage Thirumoolar and Yugi muni, the places of Vatham are the anus and below the naval.

c) THE PROPERTIES OF VALI :

“ஒழுங்குடனே தாதேழ் மூச்சோங்கி இயங்க
எழுச்சிபெற எப்பணியுமாற்ற எழுந்திரிய
வேகம் புலன்களுக்கு மேவச் சுறுசுறுப்பு
வாகளிக்கும் மாந்தர்க்கு வாயு.

- மருத்துவத் தனிப்பாடல்

d) THE FUNCTIONS OF VALI :

1. To stimulate the respiration
2. To activate the body, mind and the intellect.
3. To expel the fourteen different types of natural reflexes.
4. To activate seven physical constituents in functional co- ordination.
5. To strengthen the five sense organs.

In the above process Vatham plays a vital role to assist the body functions.

II. AZHAL (PITHAM) :

1. THE NATURE OF AZHAL :

The nature of Azhal is atomic. It is sharp and hot. The ghee becomes watery, salt crystallizes and jaggery melts because of heat. The heat of Azhal is responsible for many actions and their reactions.

2. SITES OF AZHAL:

தானான பித்தம் பின் கலையைப் பற்றிச்
சாய்வான பிராணவாயு வதனைச் சேர்ந்து
ஊனான நீர்ப்பையி லணுகி மூலத்
துதித்தெழுந்த வக்கினியை யுறவு செய்து
மானேகே னிருதயத்தி லிருப்பு மாகி
கோனான சிரந்தனிலே யிறக்க மாகி
கொண்டுநின்ற பித்தநிலை கூறி னோமே.

-வைத்திய சதகம்.

According to Vaithiya Sathagam, the pingalai, pranan, urinary bladder, stomach and heart are the places where Azhal sustains. In addition to the above places, the umbilicus, epigastric region, stomach, sweat, saliva, blood, essence of food, eyes and skin are also the places where Azhal sustains. Yugi muni says that the Azhal sustains in urine and the places below the neck.

3. THE CHARACTERS OF AZHAL :

Azhal is responsible for the digestion, vision, maintenance of the body temperature, hunger, thirst, taste etc. Its other functions include thought, knowledge, strength and softness.

4. THE FUNCTIONS OF AZHAL :

1. Maintenance of body temperature.
2. Produces reddish or yellowish colour of the body.
3. Produce heat energy on digestion of food.
4. Produces sweating.
5. Induces giddiness.
6. Produces blood and the excess blood are let out.

7. Gives yellowish coloration to the skin, eyes, faeces and urine
8. Produce anger, heat, burning sensation, inaction and determination.
9. Gives bitter or sour taste.

5. THE TYPES OF AZHAL:

1. Aakkanal – Anar Pitham or Pasaka Pitham – The fire of digestion.

It lies between the stomach and the intestine and causes digestion anddries up the moist ingested substance.

2. Vanna eri – Ranjaga Pitham – Blood promoting fire.

The fire lies in the stomach and imparts red colour to the chyme andproduces blood. It improves blood.

3. Aatralangi – Saathaga Pitham – The fire of energy.

It gives energy to do the work.

4. Nokku Azhal – Alosaga Pitham – The fire of Vision.

It lies in the eyes and causes the faculty of vision. It helps to visualize things.

5. Ul oli thee – Prasaka Pitham – the fire of brightness.

It gives colour, complexion and brightness to the skin.

III. IYYAM (KABAM) :

a) THE NATURE OF IYYAM :

Greasy, cool, dull, viscous, soft and compact are the nature of Iyyam.

b) THE SITES OF IYYAM :

“கூறினோஞ் சிலேத்மமது சமான வாய்வைக்
கொழுதியே சுழிமுனையைப் பற்றி விந்தில்
கீறியே சிரசிலாக் கினையைச் சேர்ந்து
சிங்குவையிண் ணாக்குநிண மச்சை ரத்தம்
மீறியே நிறங்கோண நரம் பெலும்பில்
மேவியதோர் மூலைபெருங் குடலிற் கண்ணில்
தேறியதோர் பொருத்திடங்க ளெல்லாஞ் சேர்ந்து
சிலேத்மமது வீற்றிருக்குந் திடங் கண்டாமே.”

-வைத்திய சதகம்.

Head, tongue, eyes, nose, throat, thorax, bone, bone marrow, joints, blood, fat, sperm and colon are the seats of Iyyam. It also lies in the stomach, spleen, the pancreas, chyle and lymph.

c) THE PROPERTIES OF IYYAM :

Stability, greasiness, formation of joints, the ability to withstand hunger, thirst, sorrow and distress are the qualities. It also helps to withstand sufferings.

d) **THE FUNCTIONS OF IYYAM :**

Greasiness, strength, roughness, knowledge, cool, growth, heaviness of bone, restriction of joint movements, pallor, indigestion, deep sleep and to have a sweet taste in tongue are the functions of Iyyam. The skin, eyes, faces and urine are white in colour due to the influence of Iyyam.

e) **THE TYPES OF IYYAM :**

- **Ali iyyam – Avalambagam:**

  Heart is the seat of Avalambagam. It controls all other types of Iyyam.

- **Neerpi iyyam – Kilethagam :**

  Its location is stomach. It adds moisture & gives softness to the ingested food.

- **Suvai kaan iyyam – Pothagam :**

  Its location is tongue. It is responsible for the sense of taste.

- **Niraivaiyyam – Tharpagam :**

  It gives coolness to the vision.

- **Ondri iyyam – Santhigam :**

  It gives lubrication to the bones particularly in the joints.

THE UDAL THATHUKKAL (PHYSICAL CONSTITUENTS) :

Udal Thathukkal is the basic physical constituents of the body. They are also constituted by the Five Elements.

1. **Saaram :** This gives mental and physical perseverance.
2. **Senneer:** Imparts colour to the body and nourishes the body.

3. **Oon :** It gives shape to the body according to the physical activity and cover the bone.
4. **Kozhuppu :** It lubricates the joints and other parts of the body to function smoothly.
5. **Enbu :** Supports the frame and responsible for the postures and movements of the body.
6. **Moolai :** It occupies the medulla of the bones and gives strength and softness to them.
7. **Sukkilam/Suronitham :** It is responsible for reproduction. These are the seven basic constituents that form the physical body. The bones are predominantly formed by the Earth component, but other elements are also present in it. All the three humours Vali, Azhal and Iyyam present in this 7constituents. The intake food converted to udal thaadhu in which the intake food is converted to saaram in the first day, and then it converted to chenneer in the Second-day, oon, kozhuppu, enbu, moolai and sukkilam/ Suronitham respectively in the following days. So in the seventh day only the intake food goes to the sukkilam/suronitham.

UDAL THEE (FOUR KINDS OF BODY FIRE) :

There are four kinds of body fire. They are Samaakkini, Vishamaakkini, Deekshaakkini and Manthaakkini.

- **SAMAAKKINI (BALACED DIGESTIVE FIRE) :**

  The digestive fire is called as Samaakkini. This is constituted by Samana Vayu, Anala Pitham and Kilethaga Kabam. If they are in normal proportion then it is called as Samakkini. It is responsible for the normal digestion of the food.

- **VISHAMAAKKINI (TOXIC DIGESTION) :**

  Due to deranged and displaced Samana Vayu, it takes a longer time for digestion of normal food. It is responsible for the indigestion due to slow digestion.

- **DEEKSHAAKINI (ACCENTUATED DIGESTION) :**

  The samana vayu rounds up the Azhal, which leads to increased Anala Pitham, so food is digested faster.

- **MANTHAAKKINI (SLUGGISH DIGESTION) :**

The samana vayu rounds up the Iyyam, which leads to increased Kilethaga Kabam. Therefore food is poorly digested for a very longer period and leads to abdominal pain, distention heaviness of the body etc.

THINAI :

There are five thinai (The Land)

1. **Kurinji –** Mountain and its surrounding areas
2. **Mullai –** Forest and its surrounding areas
3. **Marutham -** Agricultural land and its surrounding areas
4. **Neithal -** The coastal and its surrounding areas
5. **Paalai –** Desert and its surrounding areas

FEATURES OF THE FIVE REGIONS :

1. **KURINJI :**

"குறிஞ்சி வருநிலத்திற்கு கொற்றமுண்டி ரத்தம்
உறிஞ்சி வருசுரமு முண்டாம் - அறிஞருரைக்
கையமே தங்குதரா தாமைவல்லை யுங்கதிக்கும்
ஐயமே தங்கும் அறி."

- பதார்த்த குண சிந்தாமணி

Fever causing anemia, any abnormal enlargement in the abdominal organ (Aamai katti) also leads to Iyya disease.

2. **MULLAI :**

"முல்லை நிலத்தயமே மூரிநிரை மேவினுமவ்
வெல்லை நிலைத்தபித்த மெய்துருங்காண் - வல்லையெனின்
வாதமொழி யாததனுள் மன்னு மவைவழிநோய்ப்
பேதமொழி யாதறையப் பின்பு"

- பதார்த்த குண சிந்தாமணி

This mullai land leads to Azhal, Vallai & Vali diseases.

3. MARUTHAM :

"மருதநிலம் நன்னீர் வளமொன்றைக் கொண்டே
பொருதனில மாதியநோய் போக்கும் - கருதநிலத்
தாறிரதஞ்சூழ அருந்துவரென் றாற்பிணியெல்
லேறிரதஞ் சூழ்புவிக்கு மில்"

- பதார்த்த குண சிந்தாமணி

All the Vali, Azhal and Iyyam disease will be cured in this land.

4. NEITHAL :

"நெய்தனில மேலுப்பை நீங்கா துறினுமது
வெய்தனில மேதங்கு வீடாகும் - நெய்தல்
மருங்குடலை மிக்காக்கும் வல்லுறுப்பை வீக்கும்
கருங்குடலை கீழிறக்குங் காண்"

- பதார்த்த குண சிந்தாமணி

This place induces Vali diseases and affects liver and intestines.

5. PAALAI :

"பாலை நிலம்போற் படரைப் பிறப்பிக்க
மேலைநில மியாது விரித்தற்கு - வேலை நில
முப்பிணிக்கும் மில்லம் முறையே யவற்றகலாம்
எப்பிணிக்கு மில்லமா தெண்"

- பதார்த்த குண சிந்தாமணி

This land produces all the three Vali, Azhal and Iyyam disease.

KAALAM :

Ancient Tamilians had divisions over the year into different seasons known as Perumpozhudhu (segments of year) and likewise in the day, it is known as Sirupozhudhu. (segments of day)

a. PERUMPOZHUTHU :

The year is divided into six seasons. They are,

1. Kaarkalam – Aavani, Purataasi (August 16-October 15)
2. Koothir – Aipasi, Kaarthigai (October 16-December 15)
3. Munpani – Maargazhi, Thai (December 16-February 15)
4. Pin pani – Maasi, Panguni (February 16-April 15)
5. Ilavenir – Chithirai, Vaigaasi (April 16-June 15)
6. Mudhuvenir – Aani, Aadi (June 16 – August 15)

b. SIRUPOZHUDHU :

The day has been divided into six parts of four hours each. They are *Maalai* (evening), *Yammam* (Midnight), *Vaigarai* (Dawn), *Kaalai* (Morning), *Nannpakal* (Noon), *Erpaadu* (Afternoon). The each perum pozhuthu and sirupozhuthu is associated with the three humours naturaly.

Table 3.A.1 - POZHUDHU

NILAM (Types of Land)	POZHUDHU (Season)	
	PERUMPOZHUDHU	**SIRUMPOZHUDHU**
KURINJI	Koothirkaalam, Munpani	Naduiravu
MULLAI	Kaarkaalam	Maalai
MARUTHAM	Ilavenil, Venil, Kaarkaalam, Koothirkaalam,Munpani, Pinpani	Vaigarai, kaalai
NEITHAL	Ilavenil, Venil, Kaarkaalam, Koothirkaalam,Munpani, Pinpani	Pirpagal
PAALAI	Venil, Pinpani	Nadupagal

FOURTEEN NATURAL REFLEXES / URGES :

The natural reflexes excretory, protective and preventive mechanisms are responsible for the urges and instincts. They are 14 in number

1. Vatham (Flatus)
2. Thummal (Sneezing)
3. Siruneer (Micturition)
4. Malam (Defecation)
5. Kottavi (Act of yawning)
6. Pasi (Sensation of hunger)
7. Neervetkai (Sensation of thirst)
8. Erumal (Coughing)
9. Elaipu (Fatigue)
10. Thookam (Sleep)
11. Vaanthi (Vomiting)
12. Kanneer (Tears)
13. Sukkilam (Semen)
14. Suvasam (Breathing)

These natural reflexes are said to be an indication of normal functioning of our body. A proper maintenance should be carried out and they should not be restrained with force.

3.B. KUGARANA NILAI (PATHOLOGY) IN SIDDHA MEDICINE

This is the first medical system to emphasis health as the perfect state of physical, psychological, social and spiritual component of human being. The condition of the human body in which the dietary habits, daily activities and the environmental factors influence to keep the three humours in equilibrium is considered as healthy living.

DISEASE

Disease is also known by other names viz sickness, distemper, suffering and ailment, distress of mind, chronic disease and dreadful illness.

THE CHARACTERISTIC FEATURES OF THE DISEASE

Diseases are of two kinds

i) Pertaining to the body

ii) Pertaining to the mind according to the variation of the three humours.

CAUSES OF DISEASE

Excepting the disease caused by our previous births, the disease is normally caused by our food habits and actions.

This has been rightly quoted in the following verses by Sage Thiruvalluvar,

மிகினும் குறையினும் நோய்செய்யும் நூலோர்
வளிமுதலா எண்ணிய மூன்று.

- திருவள்ளுவர்.

The food and actions of a person should be in harmony with the nature of his body. Any increase or decrease in a humour viz. Vatham, Pitham, Kabam leads to the derangement of the three humours. The acceptance of food means the taste and quality of the food eaten and a person's ability to digest. 'Actions' mean his good words, deeds or bad actions. According to Sage Thiruvalluvar, the disease is caused due to the increase or decrease of three humours causing the upset of equilibrium. So disease is a condition in which there is derangement in the five elements, which alters the three humours, reflected in turn in the seven physical constituents. The change could be an increase or decrease in the humours. This shows the following signs as per vitiation of the individual humour.

1. QUANTITATIVE CHANGES OF UYIR THATHUKKAL

Table 3.B.1 - Quantitative Changes of Uyir Thathukkal

HUMOURS	INCREASED	DECREASED
VALI (Vatham)	Wasting, blackish discoloration, affinity to hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and laziness.	Body pain, feeble voice, diminished capability of the brain, decreased intellectual quotient, syncope and increased kaba condition.
AZHAL (Pitham)	Yellowish discoloration of conjunctiva, skin, urine and feces, polyphagia, polydipsia, dyspepsia, burning sensation all over the body and decreased sleep.	Loss of appetite, cold, pallor and features of increased kabam.
IYYAM (Kabam)	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnoea, flatulence, cough and excessive sleep.	Giddiness, dryness of joints, prominence of bones, profuse sweating in the hair follicles and palpitation.

2. UDAL THATHUKKAL

Table 3.B.2 - Udal Thathukkal

UDAL THATHUKAL	INCREASED FEATURES	DECREASED FEATURES
SAARAM Digestive essence (Chyme)	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical	Dryness of skin, tiredness, loss of weight, lassitude and irritability while hearing louder sounds.

	constituents, dyspnoea, flatulence, cough and excessive sleep	
SENNEER (BLOOD)	Boils in different parts of the body, spleenomegaly, tumours, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy and jaundice.	Affinity to sour and cold food, nervous debility, dryness and Pallor.
OON (Muscle mass)	Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia	Lethargic sense organs, pain in joints, muscle wasting in mandibular region, gluteal region, penis and thighs.
KOZHUPPU (Fat)	Identical feature of increased flesh, tiredness, dyspnoea on exertion, extra musculature in gluteal region, external genitalia, chest, abdomen and thighs.	Loin pain, spleenomegaly and emaciation.
ENBU (Bone)	Excessive ossification and dentition	Joint pain, falling of teeth, falling and splitting of hairs and nails.
MOOLAI (Marrow / Brain)	Heaviness of the body, swollen eyes, Swollen Inter phalangeal joints, oliguria and non-healing ulcers.	Osteoporosis and Blurred vision.
SUKKILAM OR SURONITHAM (Sperm / Ovum)	Increased sexual activity, urinary calculi.	Dribbling of sukkilam / suronitham or senner during coitus, pricking pain in the testis and inflamed & contused external genitalia.

3. SUVAIGAL

Table 3.B.3 - Suvaigal

TASTES	DISEASES DUE TO HIGH INTAKE
INIPPU (Sweet)	Develops obesity, excessive fat, increased mucous secretion, indigestion, diabetes, cervical adenitis, increased kabam and its diseases
PULIPPU (Sour)	Develops nervous weakness, dull vision, giddiness, aneamia, dropsy, dryness of tongue, acne, blisters etc.
UPPU (Salt)	Ageing, hair loss, leprosy, dryness of tongue, debility
KAIPPU (Bitter)	Increased dryness of tongue, defected Spermatogenesis, body weakness, dyspnoea lassitude, tremor,back and hip pain
KARPPU (Spice)	Dryness of tongue, generalized malaise, tremor, back pain,lassitude etc.
THUVARPPU (Astringent)	Abdominal discomfort, chest pain, tiredness, impotency,vascular constriction, constipation, dryness of tongue etc

4. KAALAM

Table 3.B.4 - Kaalam

KAALAM (Season)	**KUTTRAM**	**STATE OF KUTTRAM**
1. KAAR KAALAM **(Rainy)**Aavani -Puratasi(Aug 16 – Oct 15)	Vatham↑↑ Pitham↑ Kabam (--)	Ectopic escalation In situ escalation Restitution
2. KOOTHIR KAALAM **(Post rainy)**Iypasi –Karthigai (Oct 16 – Dec 15)	Vatham (--) Pitham ↑ ↑ Kabam (--)	Restitution Ectopic escalation Restitution

3. MUNPANI KAALAM **(Winter)** Markazhi – Thai (Dec 16 – Feb 15	Vatham (--) Pitham (--) Kabam ↑	Restitution Restitution Restitution
4. PINPANI KAALAM **(Post winter)** Masi – Panguni (Feb 16 –Apr 15)	Vatham (--) Pitham (--) Kabam ↑ ↑	Restitution Restitution In situ escalation
5. ELAVENIR KAALAM **(Summer)** Chithirai – Vaikasi(Apr 16 – Jun 15)	Vatham (--) Pitham (--) Kabam ↑ ↑	Restitution Restitution Ectopic escalation
6. MUDHUVENIR KAALAM **(Post summer)** Aani – Aadi (Jun 16 – Aug 15)	Vatham ↑ Kabam (--)	In situ escalation Restitution

5. THINAI

Table 3.B.5. Thinai

THINAI	LAND	HUMOURS
1. KURINJI	Mountain and its surroundings - Hilly terrain	Kabam
2. MULLAI	Forest and its surroundings - Forest ranges	Pitham
3. MARUTHAM	Farm land and its surroundings – Cultivable lands	All three humours are in Equilibrium
4. NEITHAL	Sea shore and its adjoining areas, Costal belt	Vatham
5. PAALAI	Desert and its surroundings Arid zone	All three humours are Affected

ALTERATION IN REFLEXES (14 Vegangal)

There are 14 natural reflexes involved in the physiology of normal human being. If it is fully restrained or suppressed, the following are resulted.

- **Vatham (Flatus)**

  This urge should not be suppressed. If it is suppressed it leads to chest pain, epigastric pain. Abdominal pain, ache, constipation, dysuria and indigestion predominantly.

- **Thummal (Sneezing)**

  If restrained, it leads to headache, facial pain, low back pain and neurotic pain in the sense organs.

- **Siruneer (Urine)**

  If restrained, it leads to urinary retention, urethral ulcer, joint pain, pain in the penis, gas formation in abdomen.

- **Malam (Feces)**

  If restrained, it leads to pain in the knee joints, headache, general weakness, flatulence and other diseases may also originate.

- **Kottavi (Yawning)**

  If restrained, it leads to indigestion, leucorrhoea, and abdominal disorders.

- **Pasi (Hunger)**

  If restrained, it leads to the tiredness of all organs, emaciation, syncope, apatheticface and joint pain.

- **Neervetkai (Thirst)**

  If restrained, it leads to the affection of all organs and pain may supervene.

- **Kaasam (Cough)**

  If it is restrained, severe cough, bad breath and heart diseases will be resulted.

- **Ilaippu (Exhaustiveness)**

  If restrained, it will lead to fainting, urinary disorders and rigor.

- **Nithirai (Sleep)**

  All organs will get rest only during sleep. So it should not be avoided. Disturbance will lead to headache, pain in the eyes, deafness and slurred speech.

- **Vaanthi (Vomiting)**

  If restrained, it leads to itching , anaemia, eye diseases and symptoms of increased Pitham.

- **Kanneer (Tears)**

  If it is restrained, it will lead to Sinusitis, heart diseases, headache and eye diseases.

- **Sukkilam (Semen)**

  If it is restrained, there will be joint pain, difficulty in urination, fever and chest pain.

- **Suvasam (Breathing)**

  If it is restrained, there will be cough, abdominal discomfort and Anorexia.

3. C. DIAGNOSTIC METHODOLOGY

The methodology of diagnosing disease in Siddha system shows uniqueness in its principle. The principle comprises of examination of Tongue, Complexion, Modulation in speech, Inspection of eyes and findings by palpation. It also includes examination of urine and stool. The reinforcement of Diagnosis is based on Naadi (Pulse) examination. All these together constitute 'Envagai thervugal' which forms the basis of diagnostic methodology in Siddha system of Medicine.

These tools not only help in diagnosis but also to observe the prognosis of the disease and for reassuring the patient and to be informed about the nature of diseases. Besides these Envagai thervugal there are some other parameters in Siddha system which are greatly helpful in diagnosing various disease, they are Manikkadai nool (Wrist circummetric sign) and Jothidam (Astrology).

ENVAGAI THERVUGAL (Eight fold examination)

The eight such diagnostic methods, collectively refered to as 'Envagai thervugal' (Eight type Examination) in Siddha system.

"அகத்துறு நோயை கரத்தாம லகம்போல்
பகுத்தறிவீர் நாடிப் பரிசம் - தொகுத்த நிறம்
கட்டுவகைச் சொல்மொழிக் கண்ட மல மூத்திரம் நா
எட்டுவகை யாலு மறிவீர்."

- அகத்தியர் வைத்திய சிந்தாமணி - 4000.

Various aspects of Siddha regarding 'Envagai Thervu'

நாடி பரிசம் நாநிறம் மொழிவிழி
மலம் மூத்திரமிவை மருத்துவராயுதம்

- தேரையர்.

மெய்க்குறி நிறந்தொனி விழிநா விருமலம் கைக்குறி

- தேரையர்.

The eight methods of diagnosis are Naadi (Pulse), Sparisam (Palpation), Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Feces) and Neer (Urine).

1. NAADI (Examination of pulse)

The pulse Diagnosis is a unique method in Siddha Medicine. The pulse should be examined in the right hand for male and the left hand for female. The pulse can be recorded at the radial artery. By keenly observing the pulsation, the diagnosis of disease as well as its prognosis can be assessed clearly.

Naadi is nothing but the manifestation of the vital energy that sustains the life with in our body. Naadi plays an important role in Envagai thervu and it has to be considered as foremost thing in assessing the prognosis and diagnosis of various diseases. Any variation that occurs in the three humours is reflected in the Naadi. These three humours organize, regularize and integrate basic functions of the human body. So, Naadi serves as good indicator of all ailments.

நாடி பார்க்கும் வகை

இடுமென்ற நாடிகள் பார்க்கும் வகையைக்கேளு
என்னவென்றால் நடுவிரல் நீவிப்பின்னே
அடுமென்ற அடுத்தவிரல் மோதிரமாம் விரலை
அப்பனே இளுத்தபின்பு சுண்டுவிரலிளுத்து
உடுமென்ற தூண்டுவிரலி ளுத்து அப்பால்
உத்ததொரு அங்குட்ட விரலைநீ விக்கரத்தில்
படுமென்ற சீயோதி அங்குல மோதள்ளி
பார்தவிட மூன்றுதாம் சுரம்பார்க்கும் வகையே
வகைஎன்ன வாதமதுஒண்ணரையாம் பித்தம்
வளமையொன்று அய்யங்கால் வளமாய் நிற்கில்
பகையில்லை நாடிகளுந் தொந்த மில்லை
பண்பான சுகரொசருரூபக் கூறுசொன்னேன்

- அகத்தியர் கனகமணி- 100

Naadi is felt by

Vali	-	Tip of index finger
Azhal	-	Tip of middle finger
Iyyam	-	Tip of ring finger

மூவகையும் மாத்திரை அளவும்:

"வழங்கிய வாதம் மாத்திரையொன்றாகில்
தழங்கிய பித்தம் தன்னில் அரைவாசி
அழங்கும் கபந்தான்அடங்கியே லோடில்
பிழங்கிய சீவர்க்குப் பிசகொன்று மில்லையே."

- குணவாகட நாடி.

The pulse is measured in wheat/grain expansile heights. The normal unit of pulse diagnosis is 1 Mathirai for Vali (Vatham), ½ for Azhal (Pitham) and ¼ for Iyyam (Kabam).

நாடி நடை

"வாகிலன்னங் கோழி மயிலென நடக்கும் வாதம்
ஏகிய வாமையட்டை யிவையென நடக்கும் பித்தம்
போகிய தவளை பாம்பு போலவாம் சேத்துமந்தான்"

- குரு நாடி.

Compared to the gait of various animals, reptiles and birds.

Vali	-	Movement of Swan and peacock
Azhal	-	Movement of Tortoise and Leech
Iyyam	-	Movement of Frog and Serpent

2. SPARISAM (Examination by touch)

TOUCH(தொடு உணர்வு):

"வெம்மை குறைந்தாலு மிகுந்தாலும் வாதபித்தம்
தம்மை நிரைநிரையாய்ச் சாற்றுவார் - வெம்மையன்றி
சீதமுஅவ் வாறாகில் சிலேட்டும மொன்றுதொந்த
மீதமுங் வாறாகு மேல்"

- அகத்தியர் வைத்திய சிந்தாமணி- 4000.

"நேயமுடனே வாதத்தின் தேசந்தானும்
நேர்மையாய் குளிர்ந்து சில விடத்திலே தான்
மாயமுட னுட்டணமுந் துடிதுடிப்பு
மருவுதலாம் பித்தத்தின் தெகந் தானும்
தோயவே வுட்ணமதா யிருக்குந் தெளிவாய்

சேத்துமத்தின் தேகமது குளிர்ந்திருக்கும்
பாய தொந்த தேகமது பலவாறாகும்
பரிந்து தொட்டுத் தேகத்தை பார்த்துப் பேசே"

- கண்ணுசாமி பரம்பரை வைத்தியம்.

- In Vali disease, some regions of the body felt chill and in some areas they are hot.
- In Azhal disease, we can feel heat.
- In Iyya disease, chillness could be felt.
- In Thontham diseases, altered sensations are felt.

3. NAA (Examination of tongue)

"பலமான ருசியறியும் நாவின் கூற்றை
பகர்கின்றேன் வாதரோகி யின்றன் நாவு
கலமாக வெடித்து கறுத்திருக்கு முட்போல்
கண்டு கொள்வாய் பித்தரோகியின்றன் நாவு
நலமுற சிவந்து பச்சென்றிருக்கும் நட்பிலா
சிலேத்துமரோகி யின்றன் நாவு
தலமதனிலுற்றமுதி யோர்கள் சொன்ன
தன்மையடி தடித்து வெளுத்திருக்கும் பாரே."

- கண்ணுசாமி பரம்பரை வைத்தியம்.

- In Vali derangement, tongue would be cold, rough, furrowed and tastes pungent.
- In Azhal, it would be red or yellow and bitter taste will be senced.
- In Iyyam, it is pale, sticky and sweet taste would be lingering.
- In Thontham, tongue will be dark with raised papillae and dryness.

4. NIRAM (Examination of complexion)

தேகத்தி னிறந்தானுஞ் செப்பக் கேளீர்
சிறுமையாய் வாதந்தான் கறுத்தி ருக்கும்
போகத்தின் பித்தற மஞ்சளாகும்
பெருஞ்சேத்ம ரோகிக்கு வெளுப்ப தாகும்
பாகத்தின் தொந்தரோ கிக்குத் தானும்
பலபலவன் ணமுமாகிப் பரந்து நிற்கும்.

- சித்த மருத்துவாங்கச் சுருக்கம்.

In Vali, Azhal and Iyyam variations, the colour of the body would be dark, yellow or red and fair respectively.

“உரைத்தகற் பான்வாத ரோகிபித்த ரோகி
அரைத்தமஞ்ச ளைக்குளித்தேன் ஆவான் - இரத்தம்
குளித்தவனு மாவான் கொடும்சிலேத்தும ரோகி
வெளுத்திடுவான் தொந்த ரோகியே”

- அகத்தியர் வைத்திய சிந்தாமணி- 4000.

According to AgathiyarVaithiyaChinthamani– 4000, In Vatha,Pitha and Kaba vitiations the colors of body like as yellow, red and pale.

“மூன்றாகும் வாதபித்த சிலேத்து மத்தால்
மிகுந்தமுறத் தொந்தித்த ரோகி தேகம்
தோன்றாத சீதய வுஷ்ணங் காலமூன்றுந்
தொகுத்தேன்யான் திரேகத்தி நிறத்தைக் கேளு
ஊன்றாத வாதவுடல் கறுத்துக் காணும்
ஊறியபித்த முடல் சிவப்புப் பசுமைகாணும்
போன்றாத வையவுடல் வெண்மை தோன்றும்
பொருந்துதொந்த ரோகவுடற் கிவற்றை யொக்கும்.”

- கண்ணுசாமி பரம்பரை வைத்தியம்.

According to Kannusamy Paramparai Vaithiyam, In Vatha, Pitha and Kaba vitiations, the colors of the body like as black, reddish green and white. In Thontha constitution, the color of the body will be associated with combination of two humours.

“பனைவாத தேகநிறங் கறுத்து நிற்கும்
பைத்தியதேக நிறமஞ்சள் சிவப்பதாமே
தாமே சிலேட்டு மதேகநிறம் வெளுப்பு தான்
தொந்தேகம் இந்நால் விதமாய நிற்கும்”

- பதிணெண் சித்தர் நாடி சாத்திரம்

According to PathinenSiddharNaadiNool, In Vatha, Pitha and Kaba vitiations, the colors of the body like as black, yellowish red and white. In Thontha constitution, the color of the body will be associated with combination of two humours.

5. VIZHI (Examination of Eyes)

"உண்மையாய் கண்கள்குறிப் பதைக்கேள் வாதம்
உற்றவிழி கறுத்துநொந்து நீருங் காணும்
தண்மையிலாப் பித்தரோகி யின்றன் கண்கள்
சார்பாகப் பசுமைசிவப் பேறுங் காணும்
வண்மையிலா வையரோகி விழிகள் தானும்
வளமான வெண்மைநிற மேதா நாதம்
திண்மையிலாத் தொந்தரோகி யின்றன் கண்கள்
தீட்டுவாய் பலநிறமென் றறைய லாமே."

- கண்ணுசாமி பரம்பரை வைத்தியம்.

"காணுகின்ற வாத ரோகிக்கு கண்கள்
கருநிறமாய் நொந்துமிகத் தண்ணீர்பாயும்
பூணுகின்ற பித்தரோகிகடி மஞ்சள் போலிருக்கும்
சிவப்பு நிறப்பொலிவு தோன்றும்"

-பதிணெண் சித்தர் நாடி சாத்திரம்.

In Vali disease, the tears are dark and tinged.

In Azhal disease, tears are yellow.

In Iyyam disease, tears are whitish in colour (clearer).

In Thontha disease, the tears are multi coloured.

In Vali disease there will be excessive tears (epiphora).

In disturbance of all three humours, eyes will be inflamed and suffused.

6. MOZHI (Examination of voice)

"பார்பதான் வாதரோகி யின்றன் வார்த்தை
பக்குவமாய்ச் சமசத்த மாயிருக்கும்
சேர்ப்பதுதான் பித்தரோகியின்றன் வார்த்தை
செப்பக்கோள பெலத்துமே யுறத்திருக்கும்
ஏற்பதுதான் ஐயரோகி யின்றன் வார்த்தை
யெளிதாகச் சிறுத்திருக்குமியல்பி தாகும்
கேசற்கவே யிம்மூன்றுந் தொந்தமாகில்
கூசாமற் பலவிதமாய் பேசுவாரே."

- **கண்ணுசாமி பரம்பரை வைத்தியம்**

In variation of Vali, Azhal and Iyyam the voice will be medium, high and shrill/low pitched respectively. By the voice, the strength of the body can be assessed.

7. MALAM (Examination of feces)

"ஒக்குமே வாத நோய் மலத்தைப் பார்க்கில்
உகந்தமலம் கறுகியெ கறுத்திருக்கும்
மிக்கபித்த நோய்மலத்தை யுற்றுப் பார்க்கில்
மிகுந்தசிவப்புடன் பசுமை தானுந் தோற்றும்
மைக்குவளை மானேகே ளைய ரோகம்
மலமதுதான் வெண்மைநிற மாயிருக்கும்
பக்குவமா யிம்மூன்றுந் தொந்திப் பாகில்
பகருமின் நிறங்கள்வகை பரிந்து காணும்."

- **கண்ணுசாமி பரம்பரை வைத்தியம்.**

- In exacerbated Vali, feces is hard, dry and black in colour.
- In Azhal vitiation, it is yellow.
- In Iyyam disturbances, it is pale
- In Thondham, it is mixture of all colours.

8. MOOTHIRAM (Examination of urine)

"ஓங்கிய வாதத்தோர்க்கு நீர்விழுங் குணந்தா நுரைக்கின்ற
பூங்கொடி கடுத்து நொந்து சிறுத்துடன் பொருமி விழும்
பாங்குடன் பித்ததோர்க்கும் பசிய நீர் சிவந்து காட்டி
ஏங்கவே கறுக்கதாக எரித்துடன் கடுத்து வீழும்
வீழுமே சிலேற்பனத்தோர் நீர்க்குணம் விளம்பக் கேளாய்
நாளுமே வெளுத்துறைந்து நலம்பெறவீழுங் கண்டாய்
வாள்விழி மானேதொந்த ரோகமானிடர்க்குந் தானே
தாளுநீர் பலநிறந்தா னெனவேசாற்றி னோமே."

- **கண்ணுசாமி பரம்பரை வைத்தியம்.**

For patients suffering from Vatha diseases, the urine will be scanty and dysuria. For patients suffering from Pitham the urine will be greenish red in colour and there will be burning micturition.

தேரையர் நீர்க்குறி நெய்க்குறி

"அருந்துமாறிரதமும் அவிரோதமாய்
அக்கல் அலர்தல் அகால்வூன் தவிர்த்முற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக்கலசத் தாவியே காது பெய்
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்க்குறி நிறுமித்தல் கடனே."

-தேரையர் நீர்க்குறி நெய்க்குறி

Sage Theraiyar, one of the renowned Siddhars of Siddha medicine described urine examination and stages of health. He had explained about the colour and consistency of the urine in vitiated humour and disease (Neerkuri). He also emphasized the spreading nature of a single drop of oil on the surface of the urine indicating the imbalance of specific dosha and prognosis of disease (Neikkuri).

Neerkuri:

"வந்த நீர்க்கரி எடை மணம் நுரை எஞ்சலேன்
றைந்தியலுளவவை யறைகுது முறையே."

-தேரையர் நீர்க்குறி நெய்க்குறி

Five characters of urine has to be examined. Those are colour, consistency, odour, frothy and deposits.

Colour of the urine

Normal urine is straw yellow coloured with mildly aromatic. The time of the day and food taken will have an impact on the colour of the urine.

Colour of the urine in diseased condition

Yellow colour (Similar to straw soaked water) - Indigestion
Lemon colour - Good digestion
Reddish yellow - Heat in body
Colour similar to flame of forest red or flame coloured - Excessive heat
Colour of saffron - Extreme heat

Neikkuri:

"அரவென நீண்டினதே வாதம்
ஆழிபோல் பரவின் அதே பித்தம்
முத்தொத்து நிற்கின் மொழிவதன் கபமே."

-தேரையர் நீர்க்குறி நெய்க்குறி.

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases.

- Aravu (Snake Pattern of spread) indicates Vali disease.
- Aazhi (Ring / Sea wave front Pattern of spread) indicates Azhal disease.
- Muthu (Pearl Pattern stays as pearl bead) indicates Iyya disease.

In Neikkuri, the rapid spread of oil drop; Pearl beaded and Sieve type of spreading pattern indicates incurable state of the disease. From this, we can assess the prognosis by the Neikkuri.

Indications of spreading pattern of oil

Lengthening	-	Vali
Splits	-	Azhal
Sieve	-	Iyyam
Stands as a drop	-	Poor prognosis
Slowly spreads	-	Good prognosis
Drop immerses into Urine	-	Incurable disease

MANIKKADAI NOOL (Wrist circumetric sign)

Ref:Agathiyar Soodamani Kayaru Soothiram

"கமலக்கை மணிக்கையில் கயறு சூத்திரம்
விமலனே நோக்கியே வேடமாமுனி
திமிலாம் பிணியது சேரச் செப்பியே
அமலனாமுனிக்கு முன்னருளிச் செய்ததே."

- **பதினெண் சித்தர் நாடி நூல்.**

According to the Pathinen Siddhar Naadinool, Manikkadai Nool is also helpful in diagnosis. This Manikkadai Nool is a parameter to access the disease by measuring the circumference of the wrist by means of a thread and then expressing it in terms of patient's finger breadths. By this measurement the disease can be diagnosed.

Manikkadai Nool Inference

(Ref: Agathiyar Soodamani Kayaru Soothiram)

When the Manikkadai Nool is 11 fbs, the person would be stout and he will live a healthy life for many years. When the Manikkadai Nool measures between 4 & 6, it indicates poor prognosis of disease and the severity of the illness will be high and it leads to death.

Measurement Possible conditions

- 10 fbs Pricking pain in chest and limbs, gastritis and ulcer result.
- 9 ¾ fbs Fissure, dryness and cough will be resulted.
- 9 ½ fbs Odema, increased body heat, burning sensation of eye, fever, Mega noi& Anorexia.
- 9 ¼ fbs Dysuria, Insomnia, Sinusitis and Burning sensation of Eye.
- 9 fbs Impaired hearing, pain around waist, thigh pain, unable to walk.
- 8 ¾ fbs Increased body heat, skin disease due to toxins, abdominal discomfort, cataract, sinusitis.
- 8 ½ fbs Leucorrhoea, venereal disorder and Infertility will occur.
- 8 ¼ fbs Stout and painful body. Headache, Sinusitis and toxins induced Cough.
- 8 fbs Abdominal discomfort, gastritis, anorexia & venereal diseases.
- 7 ¾ fbs Piles, burning sensation of limbs, headache, numbness occur.
- Within 2 years cervical adenitis and epistaxis results.
- 7 ½ fbs Osteoporosis, abdominal discomfort, burning sensation of eyes, increased body temperature. Within 6 days all the joints of the limbs presents a swelling.
- 7 ¼ fbs Lumbar pain, increased pitha in head, anemia, eye pain, odema and somnolence
- 7 fbs Pitham ascends to head, haemetemesis, phlegm, burning sensation of limbs and constipation.
- 6 ¾ fbs Eye ache, dizziness, testis disorder. Within 3 years it causes anuria, pain and burning sensation over limbs, facial sweating results.
- 6 ½ fbs Thirst, anorexia, increased body heat and Vatham results.
- 6 ¼ fbs Diarrhea, belching, vomiting and mucous dysentery
- 6 fbs Reduced weight, phlegm in chest. It results in death within 20days.

- 5 ¾ fbs Delirium, dizziness, loss of consciousness. It results in death even if the patient takes gruel diet
- 5 ½ fbs Severity of illness is increased. Toxins spread to the head.Tooth darkens. Patient will die in 10 days.
- 5 ¼ fbs Patient seems to be sleepy and death results on the next day.
- 5 fbs Pallor and dryness of the body. Kabam engorges the throat and the person will die.
- 4 ¾ fbs Dryness of tongue and tremor present. Patient will die in 7days.
- 4 ½ fbs Shrunken eyes, odema will present and death results in 9 days.
- 4 ¼ fbs Tremor, weakness of limbs and darkening of face occurs.
- 4 fbs Pedal oedema will be present. Patient will die in 5 days.

4. REVIEW OF LITERATURE ABOUT THAMARAGA NOI

Phrases found scattered regarding Cardiac ailment in T.V. Sambasivam pillai:[5]

1. **Iruthaya Rogam**
    - 'A characteristic pain in the heart due to the lymph chyle finding lodgement in the heart. This lymph chyle is contaminated by several causes owing to the deranged humours in the system; Heart Disease.'
    - 'Diseases in common of the heart; Cardiopathy.'
2. **Iruthaya Vatham**
    - Rheumatism affecting the heart, due to spread of inflammation arising from acute articular rheumatism and producing valuvular disease, Rheumatism of the heart.
3. **Iruthaya Vayu**
    - 'Neuralgia of the heart, leading to a disease of the heart known as Angina Pectoris.'
4. **Iruthavirutha Vatham**
    - 'A kind of angina extending to the chest, ribs and the back owing to the accumulation of 'gas' in the thoracic region. It is marked by cutting or piercing pain in the chest, heaviness of body, pain in the joints, loss of appetite, fatigue, vomiting etc.'
5. **Uruthira Rogam**
    - 'A disease of the thoracic region characterised by spasmodic suffocative attacks- Angina. It is so called because it is a diseases on the *Anagatham* or Rudra centre, one of the dynamic nerve plexus in the human body.'
    - 'Any disease of the organs contained in the chest such as the lungs, the heart etc.'
6. **Uruthira Vatham, Thamar Vatham**
    - 'A disease of the heart, characterised by spasmodic suffocative attacks, cardiac pain on the left side of the chest. It is due to weakness of the heart or accumulation of fat or indigestion – Angina Pectoris.'
7. **Uruthira Vayu**
    - 'A disease of the heart due to deranged condition of vayu in the system arising from indigestion, Flatulency. It is marked by pain in the region of

the sternum, suffocation, swoon, inability to sit erect or breathe while in an upright position and so on; at times it even ends in sudden death.'

8. Nenjunovu, Maarbuvali

- Pain in the chest or thorax; Disease of the heart is produced by food hot, bitter or astringent, eating before the last food is digested, supression of natural urges of stools and urine, mental worries and too much of exertion, violent blow or other injuries to chest. Symptoms are pain in the heart and palpitation followed by irregular beats, nausea, swelling of eyes and giddiness.

In Modern Science Cardiovascular disorders are classified into groups for better understanding, but in Siddha literature it has been headed under a topic called *Thamaraga Noi, Rudra Rogam.*

According to *Sage Agasthiyar*,

"மார்பினில் நோயைந்தாகு மற்றொரு நாலதாகும்"[6]

குருநாடி சாஸ்திரம் - 235

The above verse explains that there are five types of chest diseases with another classification of four.

Thamaraga Noi is classified into five types according to humour derangement;

1. Vali Thamaraga Noi
    - It is due to derangement of Vatha humour usually occurs in young age. The symptoms are tightness of chest, face becomes pale and swollen, tenesmus, palpitation, mucous accumulation in throat. As the day passes by there develops heaviness of chest, dyspnoea, uncontrollable cough and vomiting etc.
2. Azhal Thamaraga Noi
    - It occurs in the middle age. The symptoms might occur acutely during period of excited state and manifest as severe chest pain with body pain;the patient may have a feel of dying. There may be vertigo, dryness of tongue, body fatigue, excessive salivation, sweating and feeling of obstruction in the throat.

3. Iyya Thamaraga Noi
    - This predominantly occur in the period of Iya stage. The symptoms are sudden development of chest pain with drilling like sensation in the central chest bone, dyspnoea. Pain from the chest radiates to left upper limb till the tip of fingers with numbness sometimes or may become cold. As the disease progresses, there will be loss of body strength with diminished blood circulation and they may develop sudden unbearable pain in chest with sweating. Later there develops cyanosis and death may occur. This diseases is correlated to Ischemic Heart Disease symptomatically.
4. Mukkutra Thamaraga Noi
    - It occurs due to derangement of three humours. The symptoms are fever, headache, swelling of joints with inability to flex or extend, delirium, giddiness. The prognosis is poor.
5. Puzhu Thamarga Noi
    - Due to contaminated food and water there develops a worm in the intestine which may sometimes moves in upward direction towards the chest and as a result of it, there will be angina, dyspnoea, palpitation, excessive salivation, cyanosis and leads to death.

The *Sage Agasthiyar* in his treatise has described about the nature of Rudra Rogam under topic of Vaayvu Rudra Rogam;

வாய்வு ருத்திர ரோகம்

வாயுவே மிகுந்துதானால் மைந்தனே மேல்மூச்சேறும்
வாயுவே மிகுந்துதானால் மலர்ந்திடும் விரணமெல்லாம்
வாயுவே மிகுந்துதானால் மலசலமிரண்டுங் கட்டும்
வாயுவினாலேயப்பா வளருத்திர ரோகமாமே.
ஆமப்பா ருத்திர ரோகத்தாண்மையை உரைக்கக்கேளு
வேமப்பா வெம்பிப்பாய்ந்து மிக **நெஞ்சில் குத்துண்டாகிப்**
போமப்பா பித்தந்தன்னை தப்பியே போகொட்டாமல்
பாமப்பா பேசும்போது பதையாமல் சாவார்தாமே.[7]

- அகத்தியர் வைத்திய காவியம் 1500

The above verse starts by explaining about the major humour derangement for Rudra Rogam i.e Vaayu gets affected in its natural path which results in dyspnoea, anuria, constipation and **heart disease.**

The second verse explains about the nature of pain occurring in Rudra Rogam and the Pitham may get blocked in its way which results in death.

The verse in *Gunavagada Thirattu*, portrays about the nature of *Naadi* in cardiac ailment.

சரீரக் குத்தலும் நெஞ்சு நோக்காடுமாய்க் கானுமே

பார்த்திடு நாடி மூன்றும்
பதிந்தது மலிந்து நிற்கில்
தோத்திடு மேகம் உள்ளே
தோன்றியே பொருந்தி மெய்யில்
ஆத்திடாக் குத்தல் உண்டாய்
அதனோடு **நெஞ்சம் நோகும்**
தேத்தமாய் இக்கு ணங்கள்
தெளியவே அறிந்தி டாயே.

-குணவாகட திரட்டு

Naadi, One of the mainstay in eight fold examination provides us clue to capture the diagnosis. In *Sathaka Naadi*, there mentioned nine verse of pathological stages in the humour of Vazhi, Azhal, Iyyam.

The verse has mentioned the probability of arrival of heart disease in three places - ***Vatha Silathuma Naadi, Pitha Naadi and Kaba Naadi***which are as follows;

வாத சேத்தும நாடி குற்றமுற்றால்

பாங்கான வாதத்திற் சேத்துமநாடி
பரிசித்தாற் றிமிர்மேவு முளைச்சலாகுந்
தீங்கான யிருமலுடன் சன்னி தோடஞ்
சேர்ந்தவிடம் வெடிசூலை **யிருத்துரோகம்**
வாங்காத யீளையுமந் தாரகாசம்
வலியுடனே புற வீச்சுகள் வீக்கம்

ஆங்காணுஞ் சுரமுடனே சுவாசகாசம்

உண்டாகும் வெகு நோய்க்கு முறுதிதானே.[1]

- சதக நாடி

This verse of Sathaga Naadi explains about the occurrence of ailment in derangement of Vatha Silathuma Naadi and they are delirium, cough**,** ***heart disease***, fever.

பித்த நாடி குற்றமுற்றால்

உறுதியுள்ள பித்தமது தோன்றில் வெப்பு

உட்ணவாய் வத்திசுர மதிசாரங்கள்

மறதியுடன் கிறுகிறுப்பு பைத்திய ரோகம்

வளர் சோகை யழலெரிவு காந்தல் கைப்பு

இருதயத்திற் கலக்கமது மறப்பு தாகம்

எழுங்கனவு பேயணையு மயக்க மூர்ச்சை

சிறிது பெரும்பாடு ரத்தப் பிரமேகங்கள்

சேர்ந்து வெகு பிணி பலவுஞ் சிறக்குந்தானே.[1]

- சதக நாடி

This portrays about the ailment possibilities in Pitha Naadi derangement, namely dysentery, giddiness, mental disturbances, burning sensation all over the body, menorrhagia, etc. *Iruthaya Kalakam*in the versemay represent anxiety of the mind.

சேத்தும நாடி குற்றமுற்றால்

தானமுள்ள சேத்துமந்தா னிளகில் வெப்பு

சயமிரும லீளைமந் தாரகாசம்

ஈனமுறுஞ் சன்னி விடதோடம் விக்கல்

இருத்தி ரோகங் கரப்பான் விரண தோடம்

மானணையீர் சூலைதிரள் வாய்வு வீக்கம்

வருஞ்சத்தி சுவாசம் நெஞ்சடைப்புத் தூக்கம்

ஏனமுறுங் காமாலை சோகை பாண்டு

ஏழு சுரங்கள் பலத்திற்கு மிட முண்டாமே.[1]

- சதக நாடி

The Silathuma Naadi derangement results in cough, delirium, dermatitis, hiccough, oedema, vomiting, dyspnoea, excessive sleep, ***heart disease***, anemia, jaundice, fever etc.

சங்கினி நாடியும் தேவதத்தன் வாயுவும்

ஆமிந்த சங்கினியாம் நாடிதானும்
அடர்வாய்வு தேவதத்தன் தானும் கூடி
தாமிந்த லிங்கமதில் புகுந்து ஓட
சத்தமது மேல் நோக்கி தொடர்வதாகி
ஓமிந்த மேகமொடு உஷ்ணரோகம்
உற்ற சயமிருமல் குரல் கட்டுவாய்வு
போமிந்த வறட்சை மே**லிருத்து ரோகம்**
பொல்லாத கபநோய்கள் பூணும் ஐயா.[8]

-வர்ம ஒடிவு முறிவு சர சூத்திரம் 1200.

Vaayu, being the important causative in cardiac ailment notably the above verse explains about the pathological aspect of Devathathan (Thasavayu) and Sangini Naadi.

பேசிக் கொண்டிருக்கையில் சாகுதல்

ரோகம் கபத்தில் நுழைந்தேறி வாயுதான்
வாகுற்ற **நெஞ்சில் வலித்தே மயக்கிடும்**
போகுற்ற பித்தத்தை போகாமல் தம்பித்து
பாகுற்றுப் பேசையில் பதையாமல் கொல்லுமே.[9]

- பதிணெண் சித்தர்கள் நாடி சாஸ்திரம்.

The Sage Thirumoolar have explained about the nature of death in cardiac ailment in the above verse.

மார்பிற் சூலை

இளைத்திடு மார்பிற் சூலைக்கு எய்திய குணங்கள் சொல்வோம்
குளைத்திடுங் கைகால் **நெஞ்சு குத்துடன்** வறண்டு இருமும்
தளைத்திடு மார்பிற் சென்று தாக்கி மேலேறி வெட்டும்
அளைத்திடும் சீய்தான் கக்கும் ஆகாதவைய மாமே.

ஆகாத வாத பித்தம் அளைத்திடும் சூலைகேளூ
வாகான கால்கைகள் வளமுடன் கறடுகட்டும்
தாகான மேனியெல்லாம் தடிப்புடன் வெடிப்புண்ணாகும்
போகாத சாத்தியமாகிப் புணர்ச்சியாய்க் கொல்லுந்தானே.

தானென்ற சூலையோடு சமவாத சூலைகேளூ
ஊனென்ற சடந்தான் நோகும் ருசிதப்புங் கபாலப் புண்ணாம்
கானென்ற காலிலாணி எலும்பெலாம் கறுத்துக்கெட்டு
கோனென்ற கழிச்சல் தாகங் குளிர்சுரஞ் சூலையாமே.

ஆறாகுஞ் சூலையப்பா அதிலொன்றில் மூன்று சூலை
வேறாகும் பதினெட்டாகும் வெவ்வேறு சூலையில்லை
கூறாகு முன்னலப்பா குணங்கள்தான் கோடியாகும்
பாறாகு மிவர்கள் பேரைப் பிரிந்துரை செய்வோம்பாரே.[7]

- அகத்தியர் வைத்திய காவியம் 1500.

மார்பு சூலை – Pain in the chest due to rheumatism.

நெஞ்சு குத்து – A disease in which deranged humour of vaayu gets accumulated in chest as a result of damage in path of pitha and kapha humour and causing a pin prick pain in the chest with difficulty of respiration.

This verse narrates the nature of chest pain associated with fever, joint pain, papular and fissures in the skin which on combination gives infective origin of cardiac ailment.

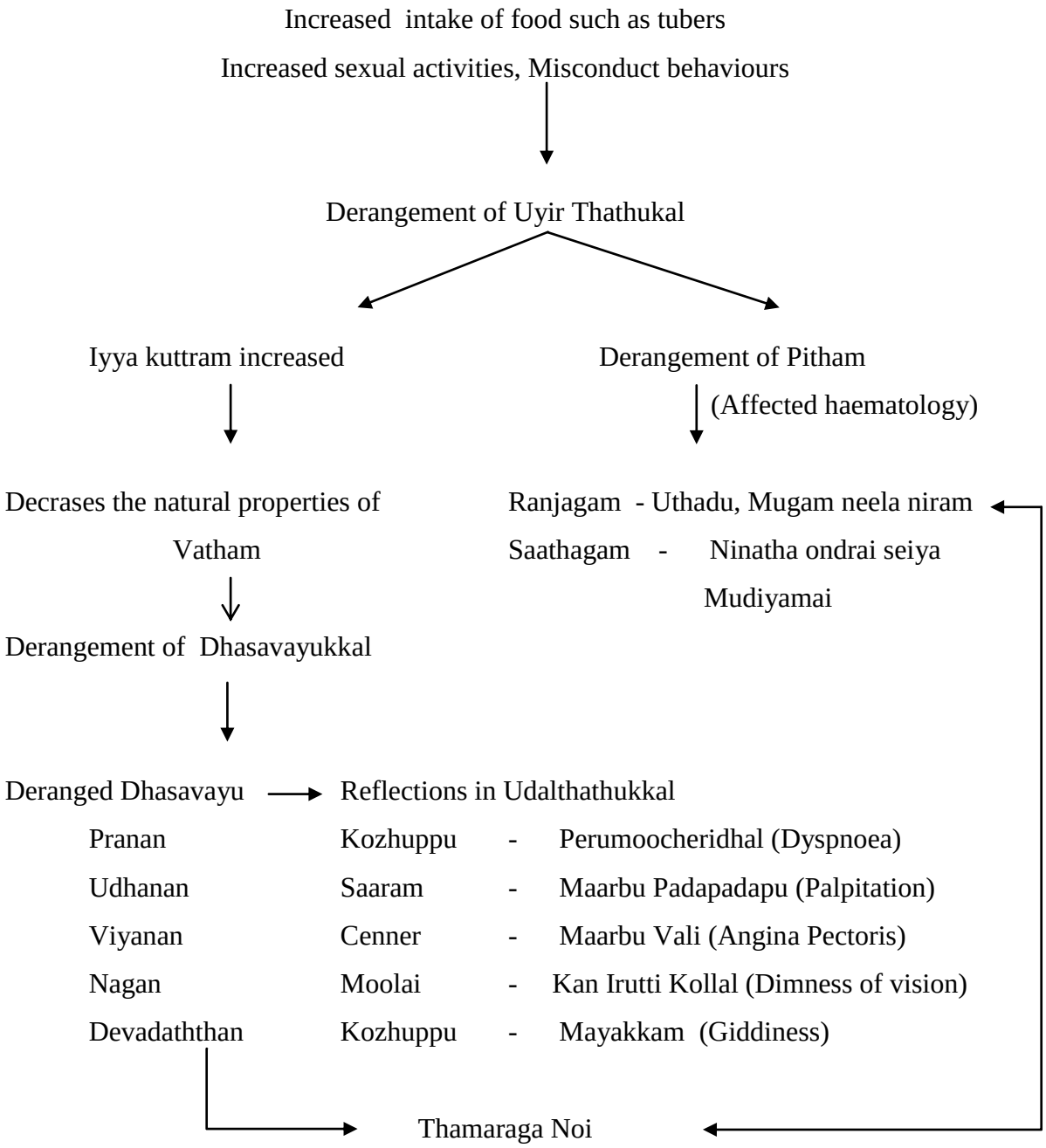
The nature of urine in cardiac ailment is explained by our sages in the below verse i.e the excreted urine will be in the colour resembling hair.

‘உண்டறு கின்றனநீர்தா னுயர்தலை முடியே போலே
கண்டிடு மெழுகதாமாங் காயினில் வியாதி யென்று
விண்டிடச் செய்வாயிந்த விதமுறு சாத்தி ரத்தைக்
கொண்டுதேர்ந் திருக்குமே கூறிய குணமி தாமே.’[1]

- **தேரையர் நீர்க்குறி நெய்க்குறி**

5. PATHOGENESIS OF THAMARAGA NOI

As Ischemic Heart Disease is selected for the study, its pathogenesis has been explained below,



Deranged 96 Thathuvas in *Thamaraga Noi*

1. AYMBOOTHAMS (FIVE ELEMENTS)

   The major derangement in *Thamaraga Noi* is *Vayu* humour and this causes chest pain and dyspnoea.

2. KANMENTHIRIYAM & GNANENTHIRIYAM

   During the course of attack, every sense organ gets affected.

3. NAADI(DIFFERENTIAL PULSE PERCEPTION

   Kaba Naadi, *Vatha kaba Naadi*, *Pitha Naadi*and *Sangini* gets affected.

4. AADHARAM (STATIONS OF SOUL)

   Anagadham gets affected since it is the position of heart.

5. MANDALAM

   Gnayiru mandilam gets affected as it lies in between the heart and neck.

6. DERANGED UDALTHATHUKAL

   Saaram - Fatigue

   Senneer - Fatigue

   Kozhupu - Dyspnoea

7. KOSAM (BODY SYSTEMS)

   1. Pranamaya kosam

      Pranamaya kosam is affected because *Pranan* is the major constituent in the kosam.

   2.Annamaya kosam

      It is affected since *Udal Thathukkal* are the major constituents in the formation of *Annamaya Kosam.*

   3.Manonmayakosam

      It is affected since *gnanenthiriyangal* are the major constituents in the formation of *Manonmayakosam.*

6. MODERN LITERATURE ABOUT HEART AND IHD

HEART:

The Heart is composed of three major types of cardiac muscle: atrial muscle, ventricular muscle and specialised excitatory and conductive muscle fibres. The atrial and ventricular types of muscle contract in much the same way as skeletal muscle, except that the duration of contraction is much longer. The specilaised excitatory and conductive fibres of the heart, however, contract only feebly because they contain few contractile fibrils, instead they exhibit either automatic rhythmical electrical discharge in the form of action potentials or conduction of the action potentials through the heart, providing an excitatory system that controls the rhythmical beating of the heart.

The internal anatomy of the heart reveals four chambers composed of cardiac muscle or myocardium. The two upper chambers (Atria) function mainly as collecting chambers; the two lower chambers (Ventricles) are much stronger and function to pump the blood. The role role of right atrium and right ventricle is to collect blood from the body and pump it to the lungs. The role of left atrium and left ventricle is to collet blood from the lungs and pump it to throughout the body. There is one- way blood flow through the heart; this flow is maintained by a set of four valves. The atrioventricular valves (tricuspid and bicuspid) allow blood to flow only from atria to ventricles. The semilunar valves (pulmonary and aortic) allow blood to flow only from the ventricles out of the heart and through the great arteries.

Although the heart is filled with blood, it provides very little nourishment and oxygen to the tissues of the heart. Instead, the tissues of the heart are supplied by a separate vascular supply commmited only to the heart. The arterial supply to the heart arises from the base of the aorta as the right and left coronary arteries (running in the coronary sulcus). The venous drainage is via cardiac veins that return deoxygenated blood to the right atrium.

The study sounds about the decreased blood supply to the heart and as a result there develops Ischemic Heart Disease (IHD). Hence it is important to know about the vasculature of the heart before discussing about IHD.

VASCULATURE OF THE HEART:

The Coronary artery which supplies the heart arises from the ostia in the left and right sinuses of the aortic semilunar valve, course within the epicardium, encircle the heart in the atrioventricular (coronary) and interventricular sulci.[10]

RIGHT CORONARY ARTERY:

The right coronary artery emerges from the aorta into the atrioventricular groove. It descends through the groove, then curves posteriorly, makes a bend at the crux of the heart, and continues downward in the posterior interventricular sulcus. Within millimetres after emerging from the aorta, the right coronary artery gives off two branches. The conus (arteriosus) artery runs to the conus arteriosus (right ventricular outflow tract), and the atrial branch goes to the right atrium. This atrial branch gives off sinoatrial nodal artery which runs along the anterior right atrium to the superior vena cava, encircling it in a clockwise or counterclock wise direction before reaching the sinoatrial node. The sinoatrial nodal artery supplies the sinoatrial node, Bachman's bundle, crista terminalis, the left and right atrial free walls.

The right coronary artery continues in the atrioventricular groove and gives off a variable number of branches to the right atrium and right ventricle. The most prominent of these is the right marginal branch, which runs down the right margin of the heart, supplying this part of right ventricle. As the right coronary artery curves posteriorly and descends downward on the posterior surface of the heart, it gives off two to three branches. One is posterior interventricular artery, which runs in the posterior interventricular sulcus. It is directed toward the apex of the heart to supply the posterior free wall of the right ventricle. In 85-90% of human hearts branches of this arteries (posterior septal arteries) supply the posterior one-third of the interventricular septum. The second artery is the atrioventricular nodal artery, which branches from the right coronary artery at the crux of the heart and passes anteriorly along the base of the atrial septum to spply the atrioventricular node, proximal parts of the Bundles of His, and parts of the posterior interventricular septum that surrounds the bundle branches. Another artery crosses the crux into the left atrioventricular groove to supply the diaphragmatic surface of the left ventricle and the posterior papillary muscle of the bicuspid valve.

The right coronary artery also serves as an important collateral supply to the anterior side of the heart, left ventricle and anterior two-third of the interventricular septum via the conus artery and communicating arteries in the interventricular septum.

LEFT CORONARY ARTERY

The left coronary artery (left main coronary artery) emerges from the aorta through the ostia of the left aortic cusp within the sinus of Valsalva. The plane of the semilunar valve is tilted so that the ostium of the left coronary artery is superior and posterior to the right coronary ostium. The left coronary artery travels from the aorta, and passes between the pulmonary trunk and the left atrial appendage. Under the appendage, the artery divides into the anterior interventricular artery and the left circumflex artery. The left coronary artery may be completely absent; that is, the anterior interventricular and circumflex arteries arise independently from the left aortic sinus.

The anterior interventricular artery appears to be adirect continuation of the lleft coronary artery that descends into the anterior interventricular groove. Branches of this artery, anterior septal perforating arteries, enter the septal myocardium to supply the anterior two- third of the interventricular septum. The first branch, the first septal perforator, supplies a major portion of the atrioventricular conduction system. In about 80% of human hearts, the second or third perforator id the longest and strongest of the septal arteries and is often called the main septal artery. This artey aupplies the middle portion of the interventricular septum. Oddly, this artery also sends a branch to the moderator band and anterior papillary muscle of the tricuspid valve. This artery is often called the moderator artery.

Other branches of the anterior interventricular artery extend laterally through the epicardium to supply the adjacent right and left ventricular free walls. The anterior interventricualr artery also sends a branch to meet the conus artery from the right coronary to form an important collateral anastomosis called the circle of Vieussens as well as branches to the anterior free wall of the left ventricle called diagonal arteries. These are numbered according to their sequence of origin as first, second and so on diagonal arteries. The most distal continuation of the anterior interventricular artery curves around the apex and travels superiorly in the posterior interventricular sulcus to anastomose with the posterior descending from the right coronary artery.

The circumflex artery branches off the left coronary artery and supplies most of the left atrium, the posterior and lateral free walls of the left ventricle and the anterior papillary muscle of the biscuspid valve. The circumflex artery may give off a variable number of left marginal branches to supply the left ventricle. The terminal branch is usually the largest of these branches. More likely, the circumflex artery may continue

through the atrioventricular sulcus to supply the posterior wall of the left ventricle and the posterior papillary muscle of the biscuspid valve.

The anterior interventricualr artery (LAD) is the most commonly occluded of the coronary arteries. It is the major blood supply to the interventricular septum and the bundle branches of the conducting system. The occlusion in this artery results in block of impulse conduction between atria and ventricles; this is known as right/left bundle branch block. The branches of RCA supply both sinoatrial node or atrioventricular nodes, thus preventing the conduction of electrical activity across the heart.

ISCHMIC HEART DISEASE

IHD is invariably caused by disease affecting the coronary arteries, the most prevalent being atherosclerosis accounting for more than 90% cases, while other causes are responsible for less than 10% cases of IHD.

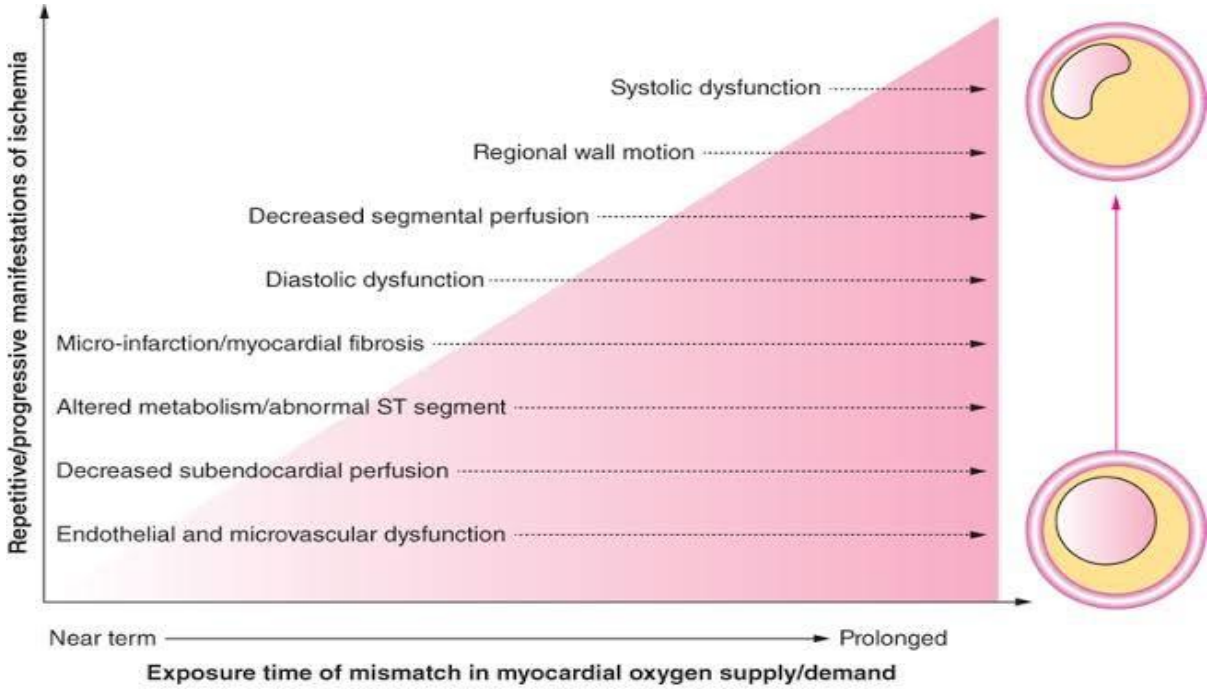


Fig 6.1 – Cascade of mechanism and manifestation of ischemia.

It is convenient to consider the etiology of IHD under three broad headings:[11]

- Coronary Atherosclerosis.
- Superadded changes in coronary atherosclerosis.
- Non – Atherosclerostic causes.

CORONARY ATHEROSCLEROSIS

Coronary Atherosclerosis resulting in ‘ fixed’ obstruction is the major cause of IHD in more than 90% cases. The lesions in atherosclerosis is not always fatal but becomes severe according to its distribution and site of lesion.

DISTRIBUTION

Atherosclerotic lesions in coronary arteries are distributed in one or more of the three major coronary arterial trunks, the highest being in the anterior descending branch of the left coronary artery, followed in decreased frequency in right coronary artery and still less in circumflex branch of left coronary artery. About one third of cases have single – vessel disease, most often left anterior descending arterial involvement; another one – third have two – vessel disease and the remainder have three major vessel disease.

LOCATION

The significant stenotic lesion thet may produce chronic myocardial ischemia show more than 75% reduction in the cross – sectional area of coronary artery or its branch. The area of severest involvement is about 3- 4 cm from the coronary ostia more often at or near the bifurcation of the arteries, suggesting the role of hemodynamic forces in atherogenesis.

FIXED ATHEROSCLEROTIC PLAQUES

The atherosclerotic plaques in the coronary arteries are more often eccentrically located bulging into the lumen from one side. Ocasionally there may be concentric thickening of the wall of the artery. Atherosclerosis produces gradual luminal narrowing that may eventually lead to ‘ fixed’ coronary obstruction.

SUPERADDED CHANGES IN CORONARY ATHEROSCLEROSIS

The attacks of acute coronary syndromes, which include acute myocardial infarction, unstable angina and sudden ischemic death are precipitated by certain changes superimposed on a pre – existing fixed coronary atheromatous plaque. These changes are as under

1. Acute changes in chronic atheromatous plaque

   Though chronic fixed obstructions are the most frequent cause of IHD, acute coronary episodes are often precipitated by sudden changes in chronic plaques such as plaque haemorrhage, fissuring or ulceration that results in thrombosis and embolization of atheromatous debris. Acute plaque changes are brought about by factors such as sudden coronary artery spasm, tachycardia, intraplaque haemorrhage and hypercholestrolaemia.

2. Coronary artery thrombosis

   Transmural acute myocardial infarction is often precipitated by partial or complete coronary thrombosis. The initiation of thrombus occurs due to surface ulceration of fixed chronic atheromatous plaque, ultimately causing complete luminal occlusion. The lipid core of plaque in particular is highly thrombogenic.Small fragments of thrombotic material are then dislodged which are embolised to terminal coronary branches and cause microinfarcts of the myocardium.

3. Local platelet aggregation and coronary artery spasm

   Some causes of acute coronary episodes are caused by local aggregates of platelets on the atheromatous plaque, short of forming a thrombus. The aggregated platelets release vasospasmic mediators such as thromboxane A2 which may probably be responsible for coronary vasospasm.

NON- ATHEROSCLEROTIC CAUSES

Several other coronary lesions may cause IHD in less than 10% of cases.

1. Vasospasm

   It has been possible to document vasospasm of one of the major coronary arterial trunks in patients with no significant atherosclerotic coronary narrowing which may cause anginaor myocardial infarction.

2. Stenosis of coronary ostia

   Coronary ostial narrowing may result from extension of syphilitic aortitis or from aortic atherosclerotic plaques encroaching on the opening.

3. Arteritis

   Various types of inflammatory involvemets of coronary arteries or small branches like in rheumatic arteritis, polyarteritis nodosa, thrombo – angitis

obliterans (Buerger's disease), Takayasu's disease, kawasaki's disease, tuberculous and other bacterial infections may contribute to myocardial damage.

4. Embolism

   Rarely, emboli originating from elsewhere in the body may occlude the left coronary artery and its branches and produce IHD. The emboli may originate from bland thrombi, or from vegetations of bacterial endocarditis rarely fat embolism and air embolism of coronary circulation may occur.

5. Thrombotic Diseases

   Another infrequent cause of coronary occlusion is from hypercoagulability of the blood such as in shock, polycythemia vera, sickle cell anemia and thrombotic thrombocytopenic purpura.

6. Trauma

   Contusion of a coronary artery from penetrating injuries may produce thrombotic occlusion.

7. Aneurysms

   Extension of dissecting aneurysm of the aorta into the coronary artery may produce thrombotic coronary occlusion. Rarely, congenital mycotic and syphilitic aneurysms may occur in coronary arteries and produce similar occlusive effects.

8. Compression

   Compression of a coronary from outside by a primary or secondary tumour of the heart may result in coronary occlusion.

MANIFESTATIONS OF CORONARY ISCHEMIA

- Angina Pectoris
- Acute Myocardial Infarction
- Chronic Ischemic Heart Disease
- Sudden Cardiac Death.

ANGINA PECTORIS

Angina Pectoris is a clinicalsyndrome of IHD resulting from transient myocardial ischemia. It is characterised by paroxysmal pain in the substernal or precordial region of the chest which is aggravated by an increase in the demand of the heart and relieved by a

decrease in the work of the heart. Often the pain radiates to the left arm, neck, jaw or right arm. It is more common in fifth decade of life.

There are three overlapping clinical patterns of angina pectoris

- Stable angina
- Prinzmetal's variant angina
- Unstable or crescendo angina.

STABLE ANGINA

This is the most common pattern.It is characterised by attacks of pain following physical exertion or emotional excitement and is relieved by rest. The pathogenesis of condition lies in chronic stenosing coronary atherosclerosis that cannot perfuse the myocardium adequately when the workload on the heart increases. During the attacks, there is depression of ST segment in the ECG due to poor perfusion of the subendocardial region of the left ventricle but there is no elevation of enzymes in the blood as there s no irreversible myocardial injury.

PRINZMETAL'S VARIANT ANGINA

This pattern of angina characterised by pain at rest and has no relationship with physical activity. The exact pathogenesis of Prinzmetal's angina is not known. It may occur due to sudden vasospasm of a coronary trunk induced by coronary atherosclerosis or may be due to release of humoral vasoconstrictors by mast cells in the coronary adventitia. ECG shows ST segment elevation due to transmural ischemia. These patients responds well to vasodilators like nitroglycerin.

UNSTABLE OR CRESCENDO ANGINA

This is also referred to as 'Pre – infarction angina' or 'acute coronary insufficiency'. This is most serious pattern of angina. It is characterised by more frequent onset of pain of prolonged duration and occurring often at rest. It is thus indicative of an impending acute myocardial infarction. Distinction between unstable angina and acute MI is made by ST segment changes on ECG – acute MI characterised by ST segnaent elevation while unstable angina may have non- ST segment elevation MI. Multiple factors are involved in the pathogenesis of unstable angina which include – sclerosing coronary atherosclerosis, complicated coronary plaques, platelet thrombi over

atherosclerotic plaques and vasospasm of coronary arteries. More often, the lesions lie in a branch of the major coronary trunk so that collaterals prevent infarction.

ACUTE MYOCARDIAL INFARCTON

Acute Myocardial Infarction is the most important consequence of coronary artery disease. Many patients may die within first few hours of onset, while remainder suffer from effects of impaired cardiac function. Acute MI may occur at all ages, though the incidensce is higher in elderly. About 5% of heart attacks occur in young people under the age of 40 years, particularly in those with major risk factors to develop atherosclerosis like Hypertension, Diabetes Mellitus, Cigarette smoking and Dyslipidemia with familial hypercholesterolaemia. Males through out their life are at a significantly higher risk of developing acute MI as compared to females.

CHRONIC ISCHEMIC HEART DISEASE

Chronic ischemic heart disease, ischemic cardiomyopathy or myocardial fibrosis are the terms used for focal or diffuse fibrosis in the myocardium characteristically found in elderly patients of progressive IHD. Such small areas of fibrous scarring are commonly found in the heart of patients who have history of episodes of angina and attacks of MI some years back. The patients generally have gradual developing CHF due to decompensation over a periodof years. Ocassionally serious cardiac arrhythmias or infarction may supervene and cause death.

SUDDEN CARDIAC DEATH

Sudden cardiac death is defined as sudden death within 24 hours of the onset of cardiac symptoms. The most important cause is coronary atherosclerosis, less commonly it may be due to coronary vasospasm and other non- ischemic causes. These include: calcific aortic stenosis, myocarditis of various types, hypertrophic cardiomyopathy,mitral valve prolapse, endocarditis and hereditary and acquired defects of the conduction system. The mechanism of sudden death by myocardial ischaemia is almost always by fatal arrhythmias, chiefly ventricular asystole or fibrillation.

INVESTIGATIONS

Symptoms are a poor guide to the extent of CAD. The first line investigation is treadmill or bicycle ergometer protocol while monitoring the patient’s pulse, BP and

general condition. Planar or downsloping ST segment depression of 1 mm or more is indicative of ischaemia. Up- sloping ST depression is less specific; it often occurs with digoxin therapy, left ventricular hypertrophy, bundle branch block and WPW syndrome. The amount of exercise that can be tolerated and the extent of ST segment change that occurs can be of value in identifying high- risk individuals with severe coronary disease in combination with other clinical features. However, exercise testing may be normal in significant proportion of patients with CAD or may be inconclusive because an adequate heart rate cannot be achieved due to reduced mobility or other non- cardiac problems. Accordingly, if clinical suspicion is high and the exercise ECG is normal or inconclusive, further imaging with myocardial perfusion scanning or stress echocardiography is indicated. A perfusion defect present during stress but not at rest provides evidence of reversible myocardial ischemia, whereas a persistent perfusion defect seen during both phases of the study is usually indicative of previous MI. Increasingly, CT coronary arteriography is being used to document the presence or absence of CAD in patients with suspected angina. It can clarify the diagnosis, help to guide optimal treatment and avoid the need for cardiac catheterisation in patients who do not have CAD or who have mild disease only.

Coronary angiography provides detailed anatomical information about the extent and nature of CAD. It is usually performed when coronary artery bypass graft surgery or percutaneous coronary intervention is being considered.[12]

The Siddha treatment is not only for removal of disease, but for the prevention and improving the body condition. This is said as follows.

1. Kaappu (Prevention)
2. Neekkam (Treatment)
3. Niraivu (Restoration)

Siddha system has unequivocally stated that even during the time of conception, some defects creep into the fertilized embryo. The defects form the basis for the manifestation of certain constitutional diseases later on during the existence of the individual. The disease for which no known cause is given designated as diseases of idiopathic origin or hereditary disorders. In Siddha system such diseases are described as Karma noikal.

1. **Kaappu (Prevention)**

பிணியனுகா விதி

"திண்ண மிரண்டுள்ளே சிக்க வடக்காமற்
பெண்ணின்பா லொன்றைப் பெருக்காமல் - உண்ணுங்கால்
நீர்சுருக்கி மோர்பெருக்கி நெய்யுருக்கி யுண்பவர் தம்
பேருரைக்கிற் போமே பிணி".

- பதார்த்த குணசிந்தாமணி.

In siddha system of medicine there are many ways to prevent disease by changing the lifestyle. It is well explained in Theraiyar Pinianugavidhi.

2. Neekkam (Treatment)

The Three Uyir Thathus which are responsible for organization, regularization and integration of the bodily structures and their physiological functions are always kept in a state of equilibrium by word, thought, deed and food of the individual. The general aetiological factors for constitutional discomfort is said to be incompatible diet, mental and physical activities.So it is essential to know the disease and the cause for the onset of the disease, before treating the patient so also to the nature of the patient, the severity of illness, the season and time of the occurrence of the diseases must be observed.

Management plan of IHD

- Explanation and Reassurance.
- Identification and treatment of aggravating conditions.
- Treatment of Risk factors.

REASSURING THE PATIENT

Making the Patient to realize that a long and productive life is possible by control of risk factors.

IDENTIFICATION AND TREATMENT OF AGGRAVATING CONDITIONS

- Left ventricular Hypertrophy, Aortic valve disease and Hypertensive cardiomayopathy should be excluded because of their contributing nature to angina.
- Obesity, Hypertenion, Hyperthyroidism should be treated aggressively to reduce the frequency and severity of angina episodes.
- Anemia decreases oxygen supply to myocardium, should also be treated.

TREATMENT OF RISK FACTORS

The risk factors for IHD are Diabetes Mellitus, Hypertension and Hyperlipidemia.

A family history of Premature IHD is also an important risk factor and they should be screen for the above treatable risk factors. Obesity impairs the treatment of other risk factors and increases the risk of adverse coronary events and it is often associated with three condition- Diabetes Mellitus, Hypertension, Hyperlipidemia. Hence the treatment of Obesity and the other risk factors is an important component of any management plan.

DIABETES MELLITUS AND DYSLIPIDEMIA

It accelerates the coronary and peripheral atherosclerosis and is frequently associated with dyslipidemias and increases in risk of angina, myocardial infarction and sudden coronary death. Aggressive control of dyslipidemia (target LDL< 70 mg/dl) and hypertension (target blood pressure 120/80 mmHg) that are frequently found in diabetic patients is highly effective.

PROPER TREATMENT FOR HYPERTENSION

Left ventricular hypertrophy resulting from sustained hypertension aggravates ischemia. Hence it is needed to control blood pressure with regular medications and there is an evidence of long term effective treatment of hypertension can decrease th eoccurence of adverse coronary events.

AVOID SMOKING

Cigarette smoking accelerates coronary atherosclerosis in both sexes and at all ages increases the risk factors of thrombosis, plaque istability, myocardial infarction and death.

Smoking cessation studies have demonstrated important benifts with a significant decline in the occurrence of these adverse coronary events.

CLINICAL MANAGEMENT FOR DISEASE CONDITION

- Normalization of altered uyirthathukal
- Internal medicines
- Diet.

NORMALISATION OF ALTERED UYIRTHATHUKKAL

Basically in IHD, blood supply to the myocardium gets decreased i.e the blood flow in blood vessels gets reduced. Among three humors, Vatham is responsible for the flow. This is due to accumulation of cholesterol in atheromatous plaque and is considered as Kabam which affects the functional flow of Vayu.

The Siddha medications were based on six tastes which will equalize the altered condition of the humor. In this case, the medicine should be in the property of decreasing the nature of kabam and to accentuate the nature of Vatham. The Sweet and Salt taste should be avoided because it is primarily made by the combination of Water with Earth and Fire and hence it aggravates Kabam. The heart is situated in the Pitham zone and hence taste which induce Pitham should be reduced. Sour and Pungent taste should be avoided since its major composition is Fire and it induces Pitham. Bitter and Astringent tastes can be recommended in the diet since its major composition is made of space and earth which might help to normalize the altered Vatham.

DIET

DO'S

- High intake of vegetables, fruits and fiber content.
- Exercising at moderate intensities.
- Aim for an ideal body weight.

DONT'S

- Avoid diet containing saturated and unsaturated fatty acids.
- Avoid excessive intake of high calories.
- Avoid smoking.

3. NIRAIVU (RESTORATION)

Patient needs good discussion and motivation and persuation to accept the eventuality of the nature of the disease and prepare for a lifestyle that provides optimization of metabolic status. In suitable effective medicinal preparations have to be administered in the beginning itself to neutralize and eliminate this disease.

Siddhars aimed at bringing the three doshas in equilibrium in the treatment of disease. Siddhars prescribed a minimum dosage initially and then increased the dose gradually. There are thousand preparations for Pitham and Vatham and for its complications in the form of Kudineer, Chooranams, Ilahams, Parpam and chenduram which is found in various Siddha text books.

Siddha system lays a great importance on the observation of rules regarding diet in everyday life because the Siddha system has rightly realized, that the basic factor of the body is food.

8. MATERIALS AND METHODS

1. **Study type:**

   Observational study

2. **Study plan:**

   Activity / observation:

1. Informed written consent	:	On Day 0
2. Demographic Data	:	On Day 0
3. History taking	:	On Day 0
4. Physical examination	:	On Day 0
5. Laboratory investigations	:	On Day 0
6. Inclusion / Exclusion criteria	:	On Day 0
7. Performing Neikkuri	:	On Day 1, 2, 3
8. Documentation	:	On Day 1, 2, 3

3. **Study place:**

   OPD & IPD,
   Ayothidoss Pandithar hospital,
   National Institute of Siddha,
   Chennai-47.

4. **Sample size:**

   - *Rudhra rogam*(Ishemic heart disease) patients : 60
   - Total : 60

5. **Selection criteria:**

   5.1. Inclusion criteria:

   - Age:25-70 Years
   - Patients who are already diagnosed with IHD.

   5.2. Exclusion criteria:

   - Patients with features of heart failure.
   - Patients with serious systemic illness

6. Methodology

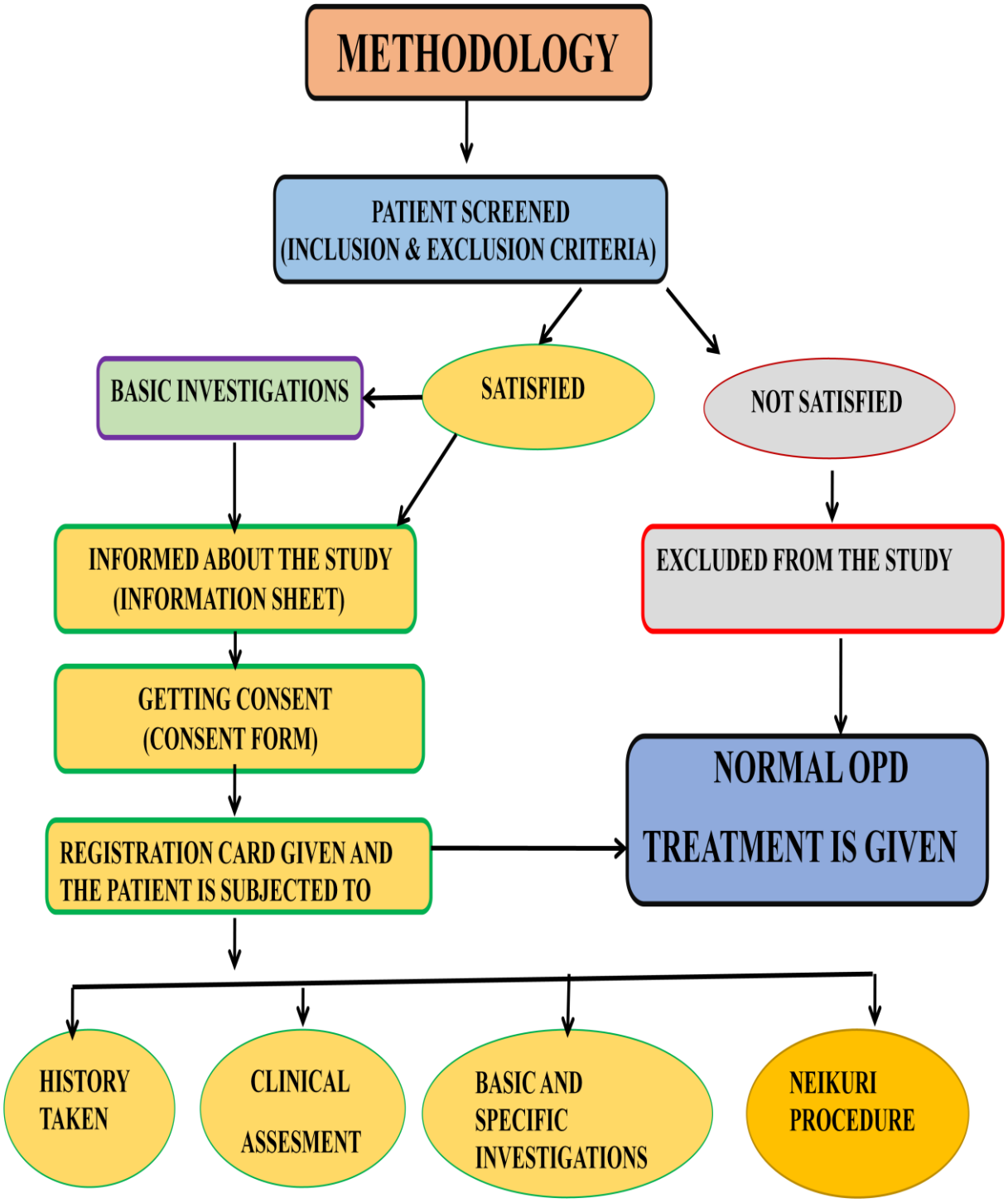


Fig 8.1 – Methodology of the study

7. Investigations

7.1. Establishing the diagnostic characteristics of *Rudhra rogam* (Ischemic Heart Disease condition) through Eight fold examination

Naadi

- Naadi nithanam
- Naadi nadai

Meikuri (Physical Signs)

- Veppam
- Viyarvai
- Thodu vali

Naa (Tongue)

- Maa padithal
- Niram
- suvai
- Vaineer ooral
- Vedippu

Niram (Complexion)

- Karuppu
- Manjal
- Veluppu

Mozhi (Voice)

- Sama oli,
- Urattha oli,
- Thazhntha oli

Vizhi (Eyes)

- Niram
- Kanneer vadithal
- Erichal
- Peelai seruthal

Malam(Stools)

- Niram
- Sikkal
- Kalichal

- Sirutthal
- Seetham

Moothiram (Urine)

Neerkuri

- Niram
- Manam
- Edai
- Nurai
- Enjal

Manikkadainool

7.2. Modern Investigation:

Blood:

- TC
- DC
- ESR
- Hb
- FBS
- PPBS
- Lipid profile
- Urea
- Creatinine

Urine:

- Albumin
- Sugar
- Deposits

Special Investigations:

- ECG/Treadmill test/Coronary Angiogram.
- Chest X-Ray

7.3. Neikkuri procedure:

Source of oil : Oil had been procured from freshly ground sesame seeds in stone grinder (chekku)without any additives being added to avoid variations in the reactions**.**Because

the presently marketed Gingely oils are treated with additives for which reason Ihave chosen the above method of additive free preparation**.**

Bowl -Glass bowl

Structure of the bowl:

Base - flat

Mouth - wide

Method of oil instilling:

- Distance between the surface of urine& the oil stick is 3-4 cm.
- Below 3cm, the stick may inadvertently touch the surface of urine, above 4cm, the oil may be dispersed due to air or it may cause ripples over the surface of the urine sample interfering with the results of the examination.

Diet pattern:

- Quality- balanced food with appropriate proportion of all six tastes
- Quantity- upto the level of his appetite

Sleep pattern

- Sound sleep

Collection of urine

- Time period –early morning (4am-6am) for IP & OP patients
- After the collection of urine sample, the neikkuri had been performed within one and half hour.

NEIKKURI PICTURE:

(Photo documentation with standard Digital imaging)

Threeslides of picture will be taken.

1. At the moment after dropping of oil.
2. At 1 minute .
3. At 3 minute.

Procedure:

Urine Sample has been Collected for Neikkuri in a sterile glass bowl. Then instill a dropof gingely oil using a stick and observe the nature of spreading of oil in urine for 3 minutes.

- Photo documentation with standard digital imaging.
- The above Neikkuri procedure is repeated (except urine analysis) for next two Consecutive days.
- Neikkuri has been done parallely in three different bowels for the same sample.

8. Data collection

- **Form I** **SCREENING PROFORMA**
- **Form II** **HISTORY PROFORMA**
- **Form III** **CLINICAL ASSESSMENT**
- **Form IV** **LABORATORY INVESTIGATIONS**
- **Form V** **CONSENT FORM**
  (Vernacular and English versions)
- **Form VI** **INFORMATION SHEET**
  (Vernacular and English version)

9. Data managment

- After enrolling the patient in the study, a separate file for each patient had been opened and all forms were filed in the file. Patient No. will be entered on the top of file for easy identification and arranged in a separate rack at the concerned OPD unit. Whenever patient visits OPD during the study period, the respective patient file was taken and necessary recordings had made at the case record form or other suitable form.
- The Data recordings was monitored for completion and compliance of patients by HOD.
- Any missed data found in during the study, it was collected from the patient, but the time related data had not been recorded retrospectively
- All collected data was entered using MS access/ excel software onto computer. Investigators had been trained to enter the patient data and cross checked by SRO.

10. Statistical analysis

All collected data was entered into computer using MS Access / MS Excel Software by the investigator. The data was analysed using STATA Software under

the guidance of SRO (stat) ,NIS .The level of significance was 0.05. Descriptive analysis was made and necessary tables / graphs generated to understand the profile of patients included in the study .The Statistical analysis for significance of different diagnostic Neerkkuri –Neikkuri will be done . Student 't' test and chi-square test, was performed for quantitative and qualitative data .

11. Ethical issue:

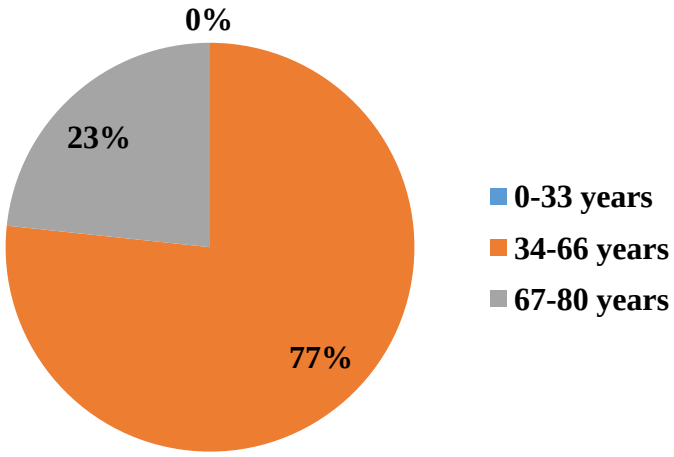
- To prevent any infection, while collecting blood sample from the patient, onlydisposable syringes, disposable gloves, with proper sterilization of lab equipments was used.
- Normal treatment procedure followed in NIS was prescribed to the study patients. There was no infringement on the rights of patient.
- The data collected from the patient was kept confidentially. The patient was informed about the diagnosis.
- Informed consent was obtained from the patient explaining in the understandable language to the patient.
- This study involves only the performing investigations andNo other investigation (not mentioned in the protocol) was done.
- Required information was collected from each patient by using following forms.

AGE DISTRIBUTION

Table- 9.1 Age Distribution

S.no	Age Distribution	Cases	Percentage
1.	0-33 years	0	0
2.	34-66 years	46	76.6
3.	67-80 years	14	23.3
4.	**Total**	**60**	**100**

Fig 9.1. Age Distribution



Observation

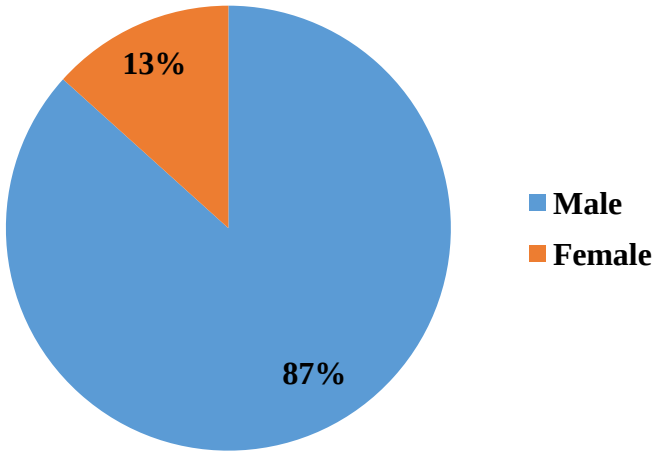
Among 60 cases, 46 cases that is 76.6% belonged to the category of age group 34 – 66 years. Only 14% cases belonged to the category of age group 67 – 80 years. None belonged to the category of 0 - 33 years.

SEX DETERMINATION

Table –9.2 Sex Determination

S.no	Sex Determination	Cases	Percentage
1.	Male	52	86.6
2.	Female	8	13.3
3.	**Total**	**60**	**100**

Fig 9.2.Sex Determination



Observation

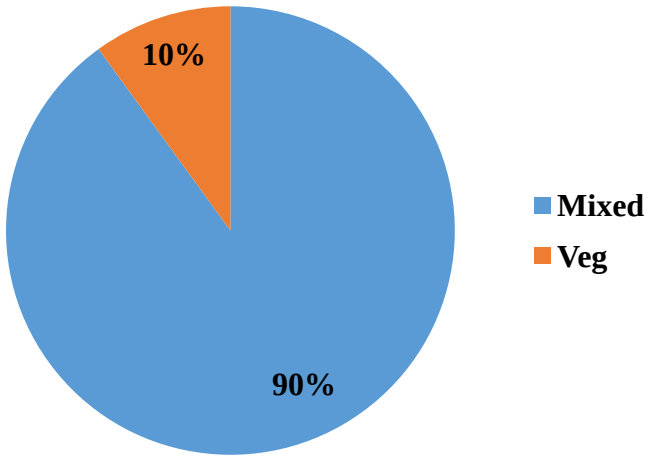
Among sixty cases, 52 cases that is 87% of cases were females and 8 cases that is 13% of cases were female.

FOOD HABITS

Table –9.3 Food Habits

S.no	Food habits	No. of cases	Percentage
1.	Mixed	54	90
2.	Veg	6	10
3.	**Total**	**60**	**100**

Fig 9.3 Food Habits



Observation

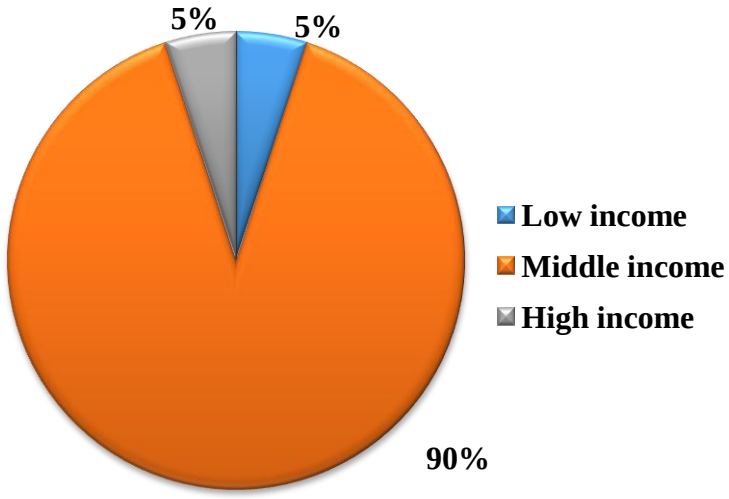
Among 60 cases, 90% of cases were having mixed diet and only 6% i.e 6 cases were vegetarian.

SOCIOECONOMIC STATUS

Table –9.4 Socioeconomic status

S.no	Economic Status	Cases	Percentage
1.	Low Income	3	5
2.	Middle Income	54	90
3.	High Income	3	5
4.	**Total**	**60**	**100**

Fig 9. 4. Socioeconomic status



Observation

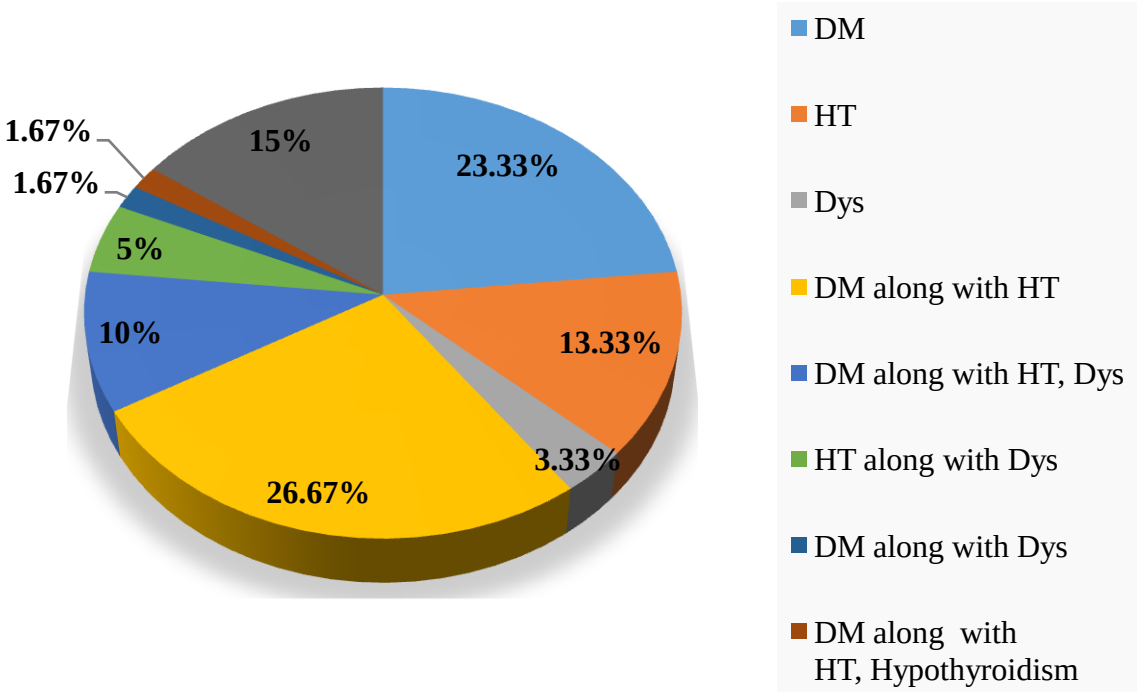
Among 60 cases, 54 cases i.e 90% of cases were under middle group and 3 cases i.e 5% were under high income group and another 5% of them belong to low income.

ETIOLOGY OF THAMARAGA NOI

Table –9.5 Etiology of Thamaraga Noi

S.no	Etiology	No. of cases	Percentage
1.	DM	14	23.33
2.	HT	8	13.33
3.	Dys	2	3.33
4.	DM along with HT	16	26.67
5.	DM along with HT,Dys	6	10.00
6.	HT along with Dys	3	5.00
7.	DM along with Dys	1	1.67
8.	DM along with HT, Hypothyroidism,Dys	1	1.67
9.	Nil	9	15.00
10.	**Total**	**60**	**100**

Fig.9. 5. ETIOLOGY OF THAMARAGA NOI



Observation

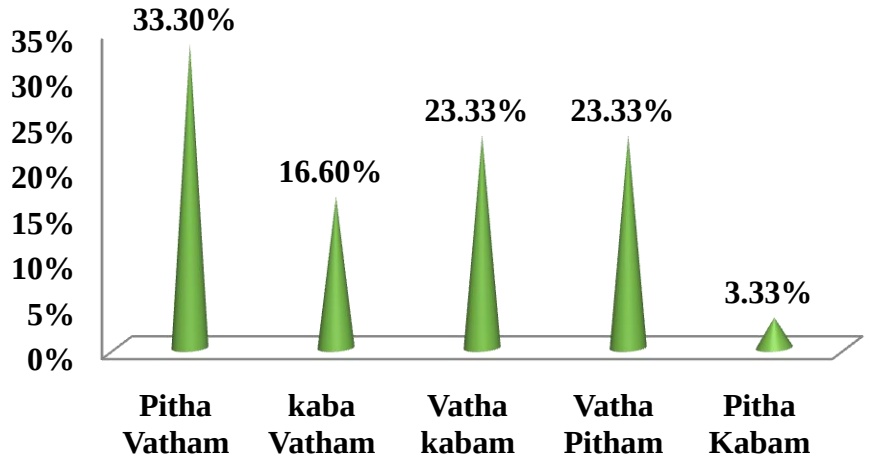
Among 60 cases, 27% cases were Diabetes along with Hypertension, 23% cases were Diabetes and 13% cases were hypertensive, 10% of cases were Diabetic and hypertensive along with dyslipidemia.

YAKKAI ILAKKANAM

Table –9.6 Yakkai Ilakkanam

S.no	Yakkai	cases	Percentage
1.	Pitha Vatham	20	33.3
2.	Kaba Vatham	10	16.6
3.	Vatha kabam	14	23.3
4.	Vatha Pitham	14	23.3
5.	Pitha Kabam	2	3.3
6.	Total	60	100

Fig.9. 6 Yakkai Ilakanam



Observation

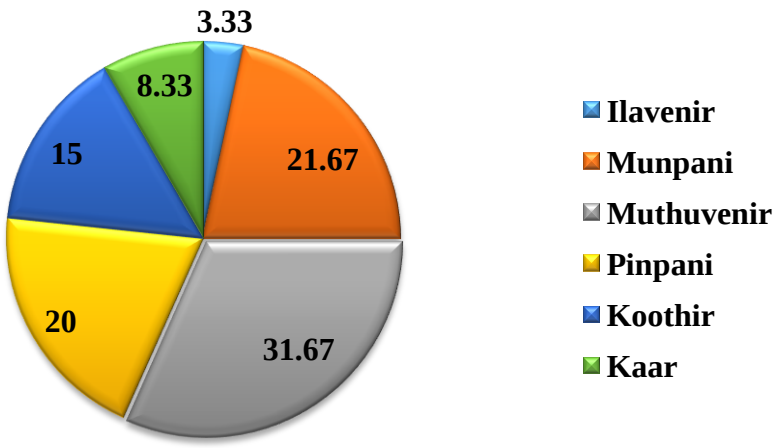
Among 60 cases, 20 cases i.e 33.3% of them are PithaVatha dhegi and 23.3% of cases i.e 14 of them are Vatha Kabam dhegi and another 14 cases are Vatha Pitham dhegi.

NOI UTRA KAALAM

Table 9.7. Noi Utra kaalam

S.no	Noiutra kaalam	cases	Percentage
1.	Ilavenir	2	3.33
2.	Munpani	13	21.67
3.	Muthuvenir	19	31.67
4.	Pinpani	12	20.00
5.	Koothir	9	15.00
6.	Kaar	5	8.33
7.	**Total**	**60**	**100**

Fig9.7 NOI UTRA KAALAM



Observation

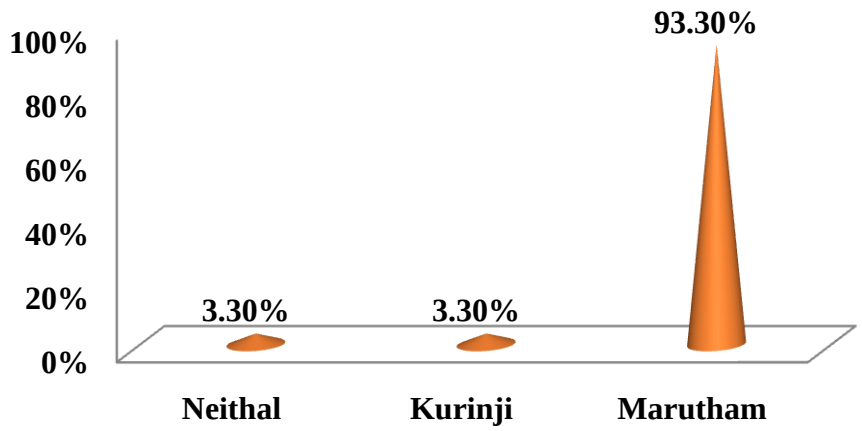
Among 60 cases 22% of cases affected in Munpani Kaalam and 20% of cases were affected in Pinpani kaalam, 32% cases affected in Muthuvenir kaalam and 15% cases were affected in koothir kaalam.

NOI UTRA NILAM

Table- 9.8. Noi Utra Kaalam

S.no	Nilam	No. of cases	Percentage
1.	Neithal	2	3.3
2.	Kurinji	2	3.3
3.	Marutham	56	93.3
4.	**Total**	**60**	**100**

Fig9. 8 Nilam



Observation

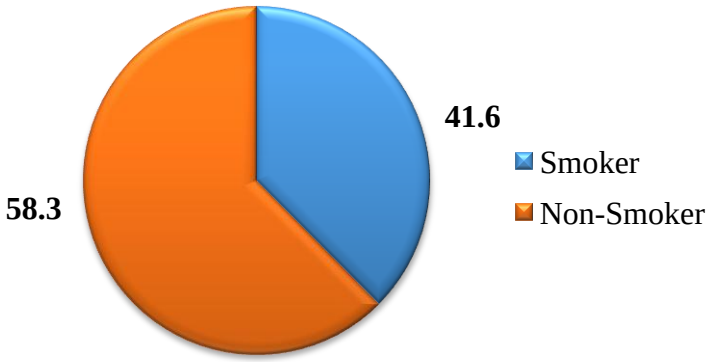
Among sixty cases, 2 patients i.e 3.3% are from Neithal and 2 patients i.e 3.3% are from kurinji 56 patients i.e 93.3% are from Marutham.

PERSONAL HABITS

Table – 9.9 Personal Habits

S.No	Personal Habit	cases	Percentage
1.	Smoker	25	41.6
2.	Non-Smoker	35	58.3
3.	**Total**	**60**	**100**

Fig 9. 9. Smoking



Observation

Among 60 cases, 25 cases i.e 41.6% had past history of smoking.

Inference

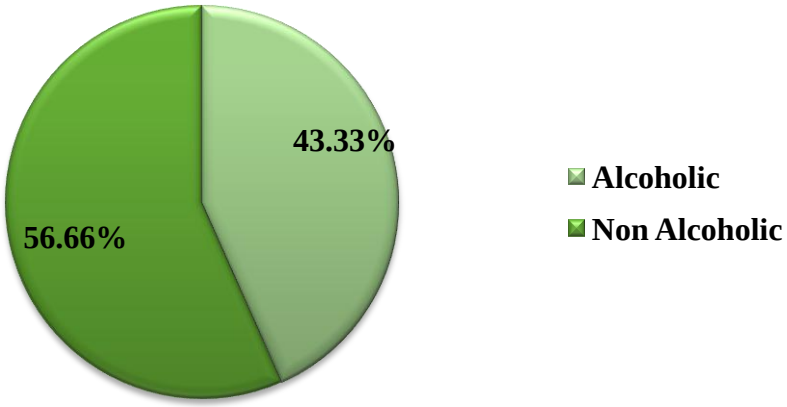
As per studies, smoking is one of the main cause for IHD but in this hospital based study, sample size was limited and hence it showed lesser incidence for smoking.

PAST HISTORY OF ALCOHOLISM

Table -9.10 Past history of Alcoholism

S.no	Past history of alcoholism	No of cases	Percentage
1.	Alcoholic	26	43.33%
2.	Non- Alcoholic	34	56.66%
3.	**Total**	**60**	**100**

Fig 9.10.Past history of alcoholism



Observation

Among sixty cases, 26 cases (43%) of them had past history of alcoholic.

Inference

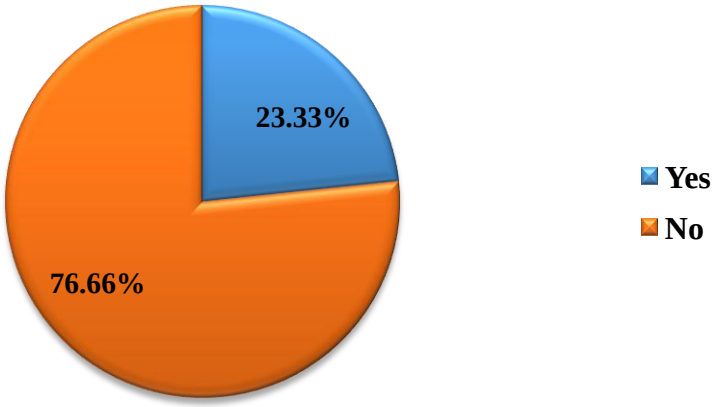
Alcoholism is also one of the cause for IHD, but in this hospital based study, sample size was limited and hence it showed lesser incidence for alcoholism.

FAMILY EXPOSURE

Table – 9.11. Family Exposure

S.no	Family exposure	No. Of cases	Percentage
1.	Yes	14	23.33%
2.	No	46	76.66%
3.	**Total**	**60**	**100**

Fig 9.11 Family exposure



Observation

Among sixty cases, only 14 cases (23.33%) had familial predisposition of IHD.

Inference

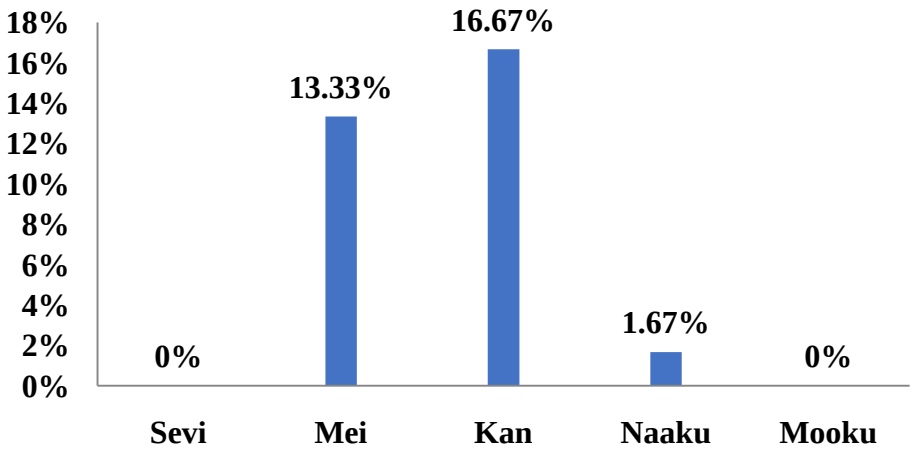
Though family history of premature IHD is an impartant indicator of increased risk, this study shows lesser incidence as this may be conducted in very small population.

GNAENTHIRIYANGAL

Table – 9.12. Gnanenthiriyangal

S.No.	Gnanenthiriyangal	No. of cases	Percentage
1.	Sevi (Ear)	0	0
2.	Mei (Skin)	8	13.33
3.	Kan (Eyes)	10	16.67
4.	Naaku (Tongue)	1	1.67
5.	Mooku (Nose)	0	0

Fig 9.12. Gnanenthiriyangal



Observation

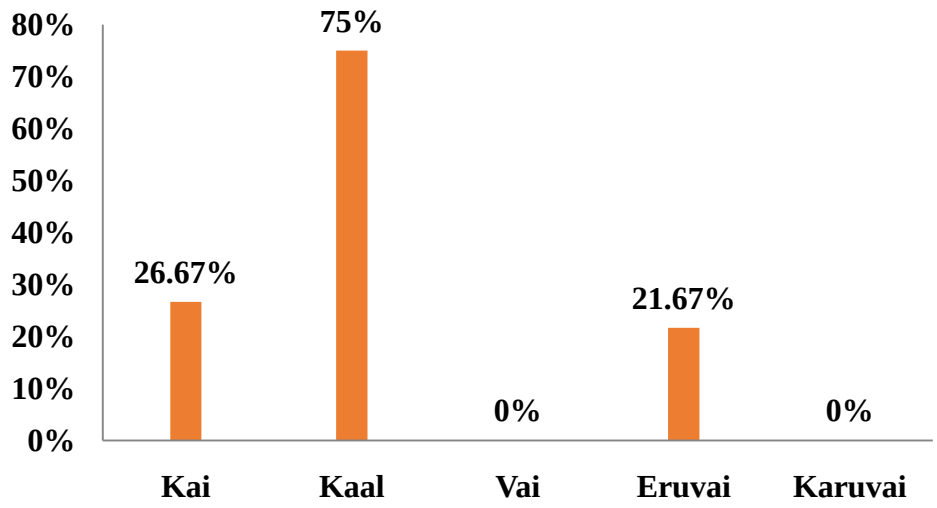
Among 60 cases in 10 patients (16.67%), Kan was affected and in 8 patients (13.33%) Mei was affected.

KANMENTHIRIYANGAL

Table – 9.13. Kanmenthiriyangal

S.no	Kanmenthiriyangal	No. of cases	Percentage
1.	Kai (Hand)	16	26.67
2.	Kaal (Leg)	45	75.00
3.	Vai (Mouth)	0	0.00
4.	Eruvai (Anus)	13	21.67
5.	Karuvai (Birth canal)	0	0

Fig. 9.13.Kanmenthiriyangal



Observation

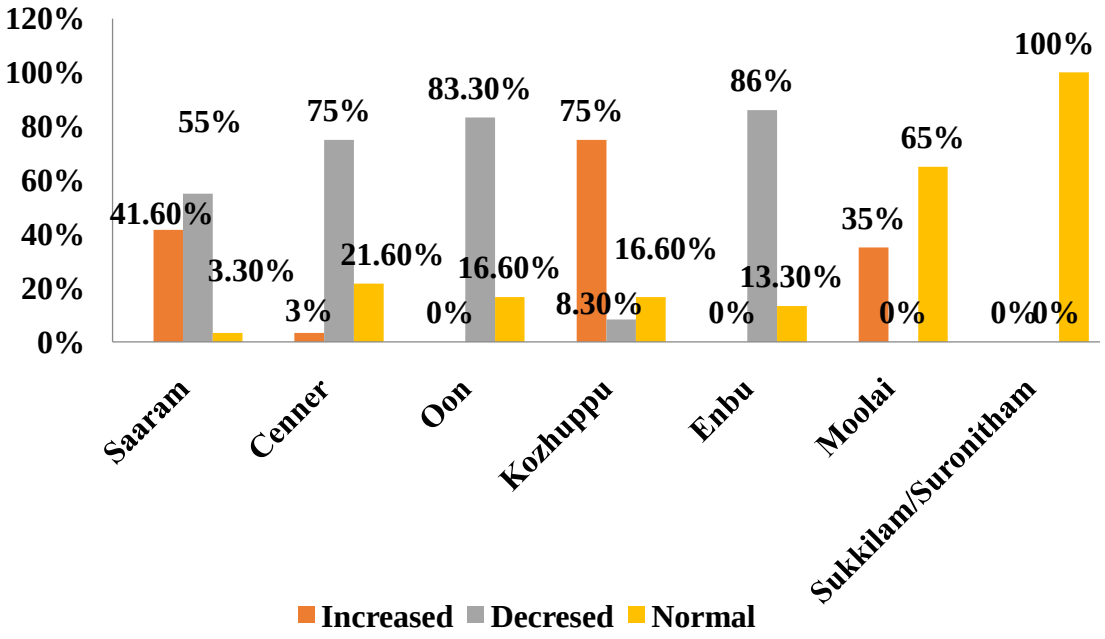
Among sixty cases in 45 cases i.e 75%, Kaal was affected and in 16 cases i.e 26.67% kai was affected and in 13 cases i.e Eruvai was affected.

UDAL THATHUKKAL

Table- 9.14. Udal Thathukkal

S.NO	Udal Thathukkal	Increased		Decreased		Normal		Total	
1.	Saaram	25	41.6%	33	55%	2	3.33%	60	100
2.	Senner	2	3.3%	45	75%	13	21.6%	60	100
3.	Oon	0	0%	50	83.33%	10	16.66%	60	100
4.	Kozhuppu	45	75%	5	8.3%	10	16.66%	60	100
5.	Enbu	0	0%	52	86%	8	13.33%	60	100
6.	Moolai	21	35%	0	0%	39	65%	60	100
7.	Sukkilam/Suronitham	0	0%	0	0%	60	100%	60	100

Fig 9.14.Udal Thathukkal



Observation

Out of 60 cases, in 25 cases (41.60%) saaram was increased and in 33 cases (55%) it was decreased. Cenner was increased in 2 cases(3%) and it was decreased in 45 cases (75%). Oon was decreased in 50 cases (83.30%) and Kozhuppu was increased in 45 cases (75%) and it was decreased in 5 cases (8.30%). Enbu was decreased in cases of 52 (86%). Moolai was increased in 21 cases (35%). Sukkilam and Suronitham was not affected in any of the cases.

Inference

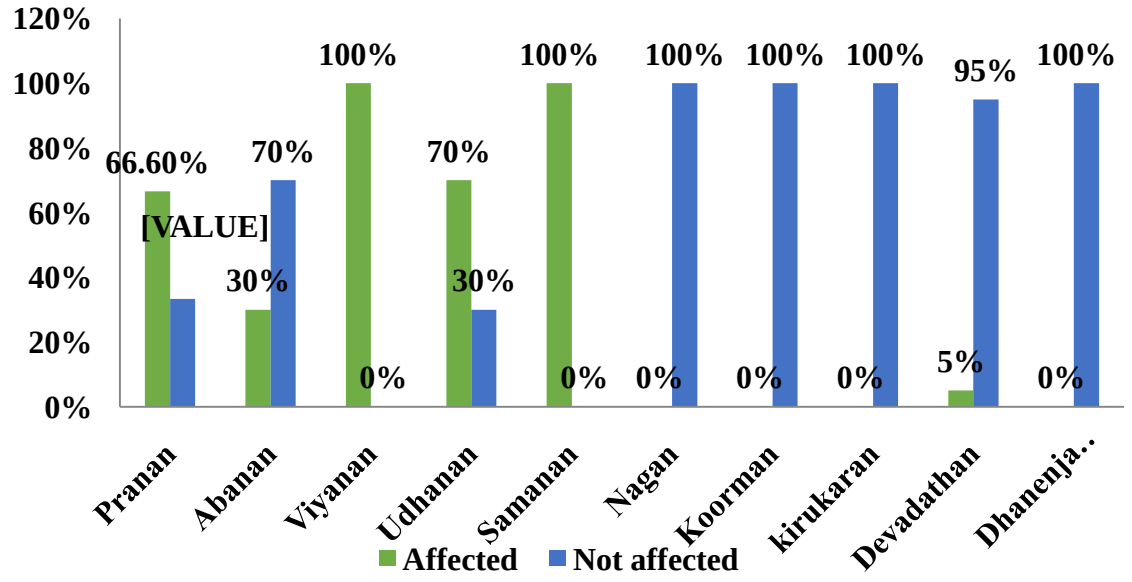
Saaram, Cenner, Oon, Enbu was decreased in majority of cases. Moolai and Kozhuppu was also increased in majority of cases. As per literature Udal thathukkal gets affected one by one and atlast resulting in diseases. In this study it is seen that every Udal thathukkal were affected in majority of cases justifying the literature.

UYIR THATHUKKAL – VATHAM

Table – 9.15. Uyir Thathukkal

S.NO	Vali	Cases Affected	Percentage	Cases Not affected	Percentage
1.	Pranan	40	66.66%	20	33.33%
2.	Abanan	18	30%	42	70%
3.	Udhanan	42	70%	18	30%
4.	Viyanan	60	100%	0	0%
5.	Samanan	60	100%	0	0%
6.	Nagan	0	0%	60	100%
7.	Koorman	0	0%	60	100%
8.	Kirukaran	0	0%	60	100
9.	Devadaththan	3	5%	57	95%
10.	Dhanaenjayan	0	0%	60	100%

Fig. 9. 15. Uyir Thathukkal - Vatham



Observation

Out of 60 cases Pranan was affected in 40 cases (66.66%), Abanan was affected in 18 cases (30%), Udhanan was affected in 42 cases (70%), Viyanan and Samanan was affected in all 60 cases (100%) and Devadaththan was affected in 3 cases (5%). Nagan, Koorman, Kirukaran and Dahanenjayan was not affected in any of the cases.

Inference

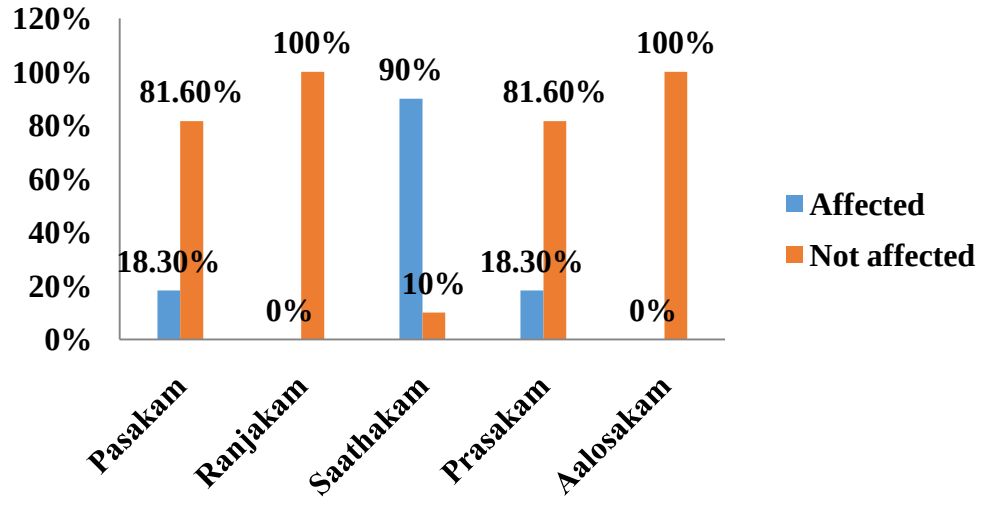
Pranan, Viyanan, Samanan were affected in majorithy of cases. Dyspnoea is common in Ischemic Heart Diseases which is a feature of Pranan and hence it shows significant in the study.

UYIR THATHUKKAL – AZHAL

Table – 9.16. Uyir Thathukkal - Azhal

S.NO	Azhal	No.of cases Affected	Percentage	Cases not affected	Percentage
1.	Paasakam	11	18.3%	49	18.3%
2.	Ranjakam	0	0%	60	100%
3.	Saathagam	54	90%	6	10%
4.	Prasakam	11	18.3%	49	18.3%
5.	Aalosakam	0	0%	60	100%

Fig. 9. 16. Uyir Thathukkal - Azhal



Observation

Out of 60 cases, in 11 cases (18.3%) Paasakam was affected and in 54 cases (90%) Saathakam was affected and in 11 cases (18.3%) Prasakam was affected.

Inference

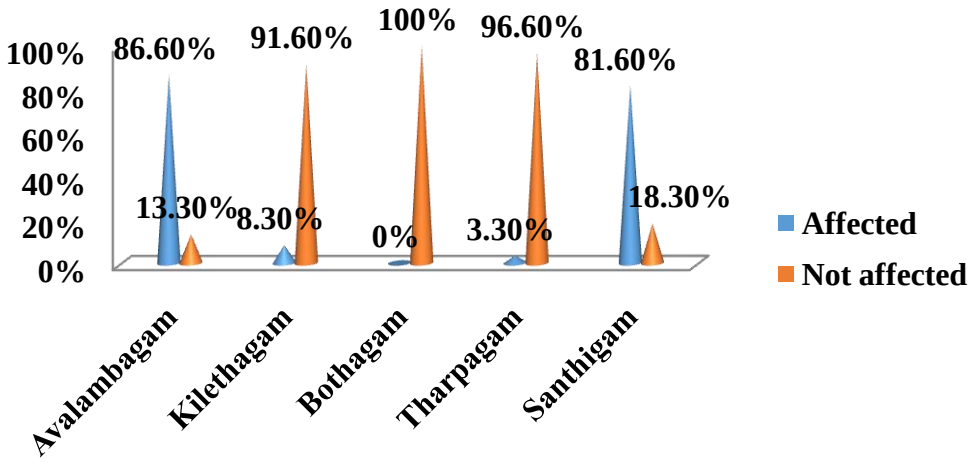
Saathakam was affected in majority of cases, any diseased one will be having difficulty in doing desired activities, which is a feature of Saathakam.

UYIR THATHUKKAL – IYYAM

Table – 9.17. Iyyam

S.NO	Iyyam	No. of cases affected	Percentage	Cases not affected	Percentage
1.	Avalambagam	52	86.6%	8	13.3%
2.	Kilethagam	5	8.3%	55	91.6%
3.	Bothagam	0	0%	60	100%
4.	Tharpagam	2	3.33%	58	96.66%
5.	Santhigam	49	81.6%	11	18.3%

Fig.9. 17. Iyyam



Observation

Out of 60 cases in 52 cases (86.6%) Avalambagam was affected and in 49 cases (81.6%) Santhigam was affected.

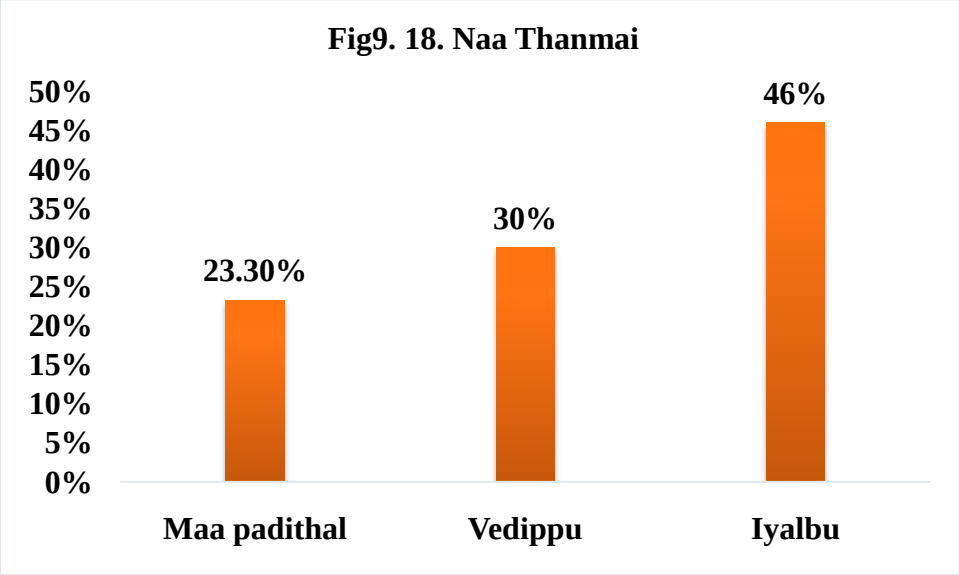
Inference

Avalambagam and Santhigam was the affected components of Iyyam among the selected patient

ENNVAGAI THERVUGAL

Table- 9.18 -NAA

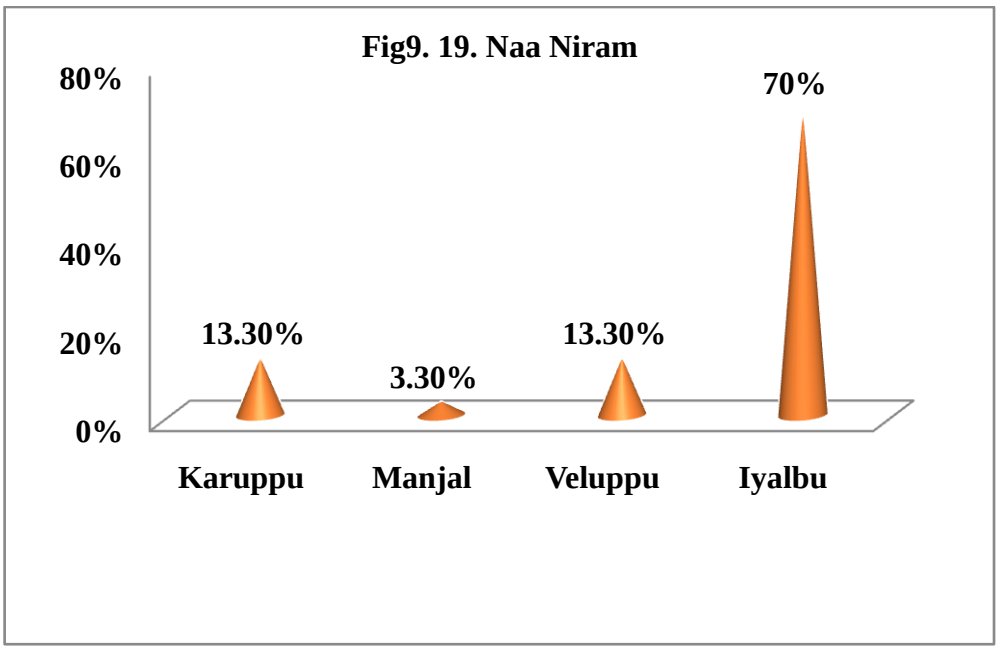
Naa		Thamaraga noi No. of cases	Percentage
Thanmai	Maapadithal	14	23.33%
	Vedippu	18	30%
	Iyalbu	28	46.6%
	Total	**60**	**100%**
Niram	Karuppu	8	13.33%
	Manjal	2	3.33%
	Veluppu	8	13.33%
	Normal	42	70%
	Total	**60**	**100%**
Suvai	Kaippu	0	0%
	Pulippu	1	1.6%
	Inippu	2	3.3%
	Normal	57	95%
	Total	**60**	**100%**
Vaineeroral	Increased	0	0%
	Reduced	1	1.6%
	Iyalbu	59	98.3%
	Total	**60**	**100%**



Observation

Out of 60 patients, Maa padithal was seen in 14 cases (23.30%) and Vedippu was seen in 18 cases (30%).

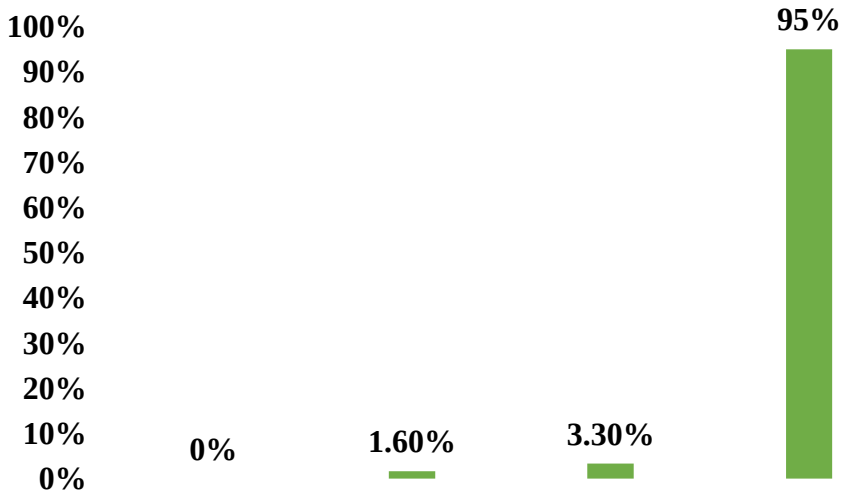
Colour of tongue



Observation

Among 60 cases, 8 patients (13.33%) had black discoloration in tongue and in 2 cases (3.3%) had yellow discoloration in tongue and white discoloration seen in cases of 8 patients (13.3%). Remaining 42 cases (70%) had normal tongue.

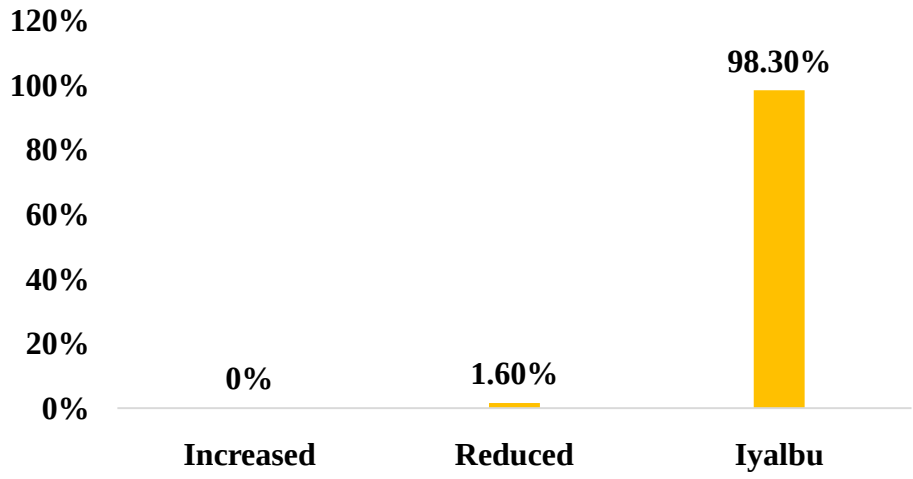
Fig 9. 20. Suvai



Observation

Among 60 patients, Pulippu taste felt in one case (1.6%), and Inippu taste felt in two cases (3.3%) and remaining 57 cases were doesn't have any taste sensation in tongue.

Fig 9. 21. Salivation



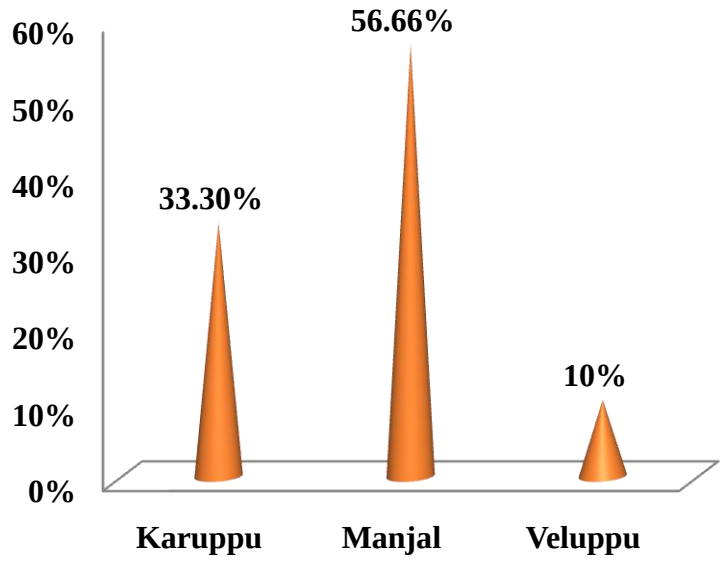
Observation

Among sixty cases, in one case salivation is reduced (1.6%), 59 cases (98.3%) were have normal salivation

Table- 9.19.Niram, Mozhi and Vizhi

Niram, Mozhi and Vizhi		Thamaraga noi No. of cases	Percentage
Niram	Karuppu	20	33.3%
	Manjal	34	56.6%
	Veluppu	6	10%
	Total	**60**	**100%**
Mozhi	Sama oli	8	13.33%
	Uratha oli	21	35%
	Thazhantha oli	31	51.66%
	Total	**60**	**100%**
Vizhiyin Niram	Karuppu	0	0%
	Manjal	26	43.3%
	Sivappu	5	8.3%
	Veluppu	4	6.6%
	Iyalbu	25	41.6%
	Total	**60**	**100%**
Vizhiyin Thanmai	Kanneer	0	0%
	Kan erichchal	2	3.33%
	Peelai seruthal	2	3.33%
	Iyalbu	56	93.33%
	Total	**60**	**100%**

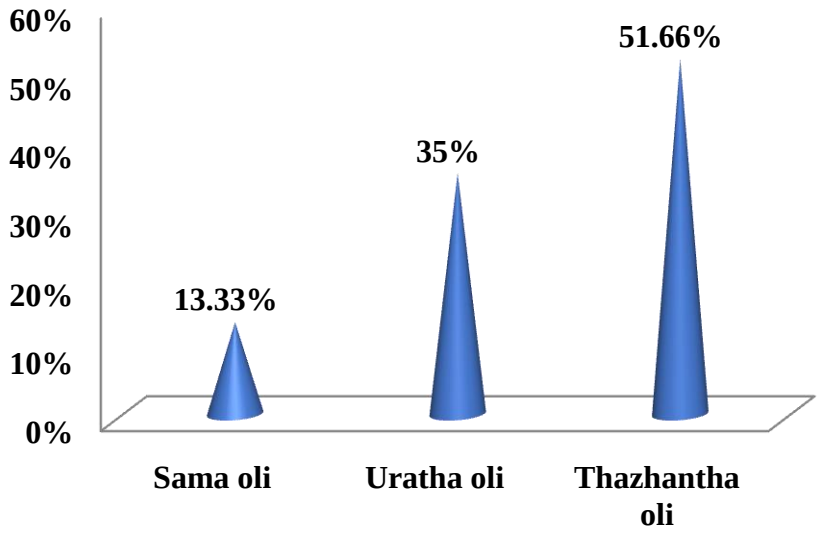
Fig 9. 22. Niram



Observation

Among 60 cases, 20 patients (33.30%) are black in colour and 34 patients (56.66%) are yellow in colour and 6 patients (10%) are white in colour.

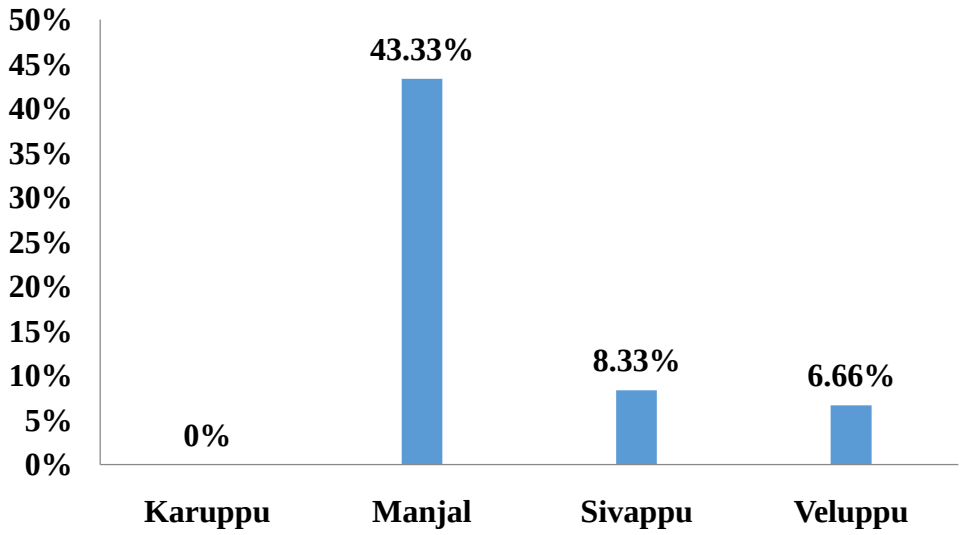
Fig 9. 22. Mozhi



Observation

Among 60 patients, 8 cases (13.3%) were had Sama oli, 21 patients (35%) were had Uratha oli and in 31 patients (51.66%) had Thanzhantha oli.

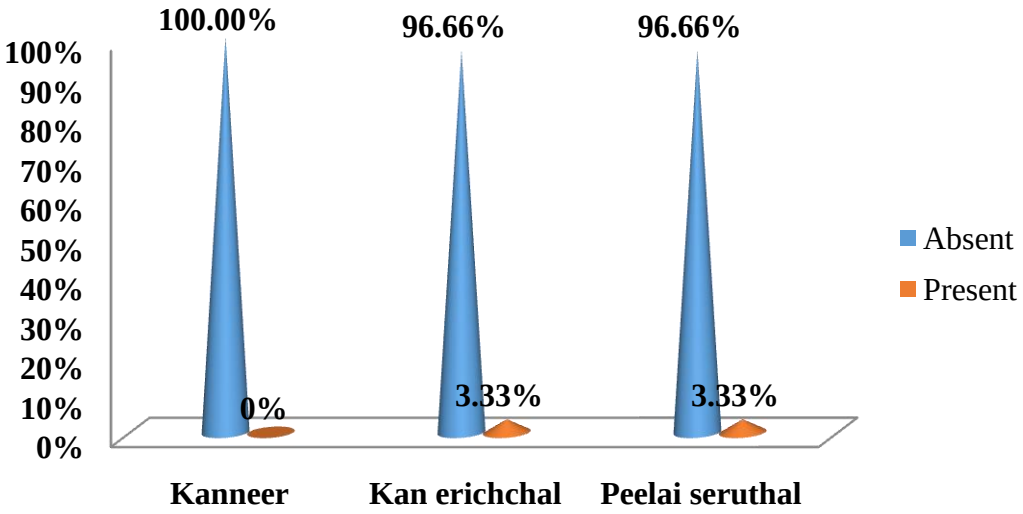
Fig 9. 23. Vizhiyin niram



Observation

Among sixty cases, 26 cases (43.33%) had yellow discoloration of eyes and in five cases (8.33%) had red discoloration of eyes, 4 cases (6.66%) had white discoloration of eyes.

Fig9.24. Vizhiyin Thanmai



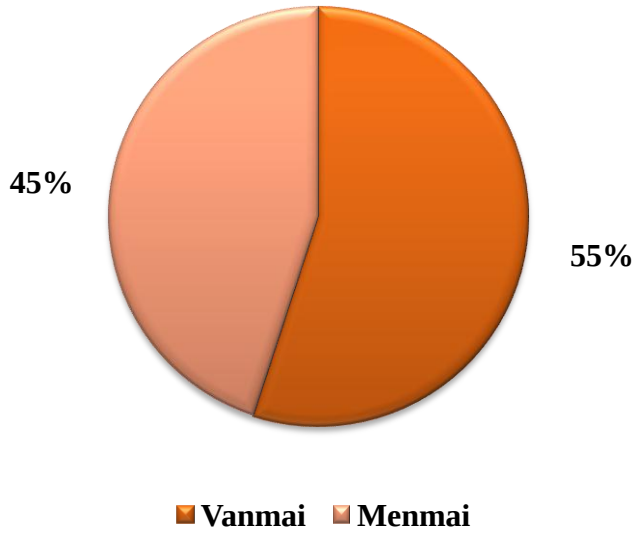
Observation

Among sixty cases, 2 cases (3.33%) had kan erichchal and 2 cases (3.33%) had Peelai seruthal.

Table- 9.20. NAADI

Naadi		Thamaraga noi No of cases	Percentage
Naadi Nithanam (Pulse Appraisal	Vanmai	33	55%
	Menmai	27	45%
	Total	60	100%
Naadi Panbu (Pulse character	Thannadai	33	55%
	Ilaithal	27	45%
	Total	60	100%
Naadi Nadai (Pulse Play)	VathaPitham	11	18.3%
	Vatha Kabam	1	1.6%
	Pitha Vatham	15	25%
	Pitha Kabam	1	1.6%
	Kaba Vatham	25	41.6%
	Kaba Pitham	1	11.6%
	Total	**60**	**100%**

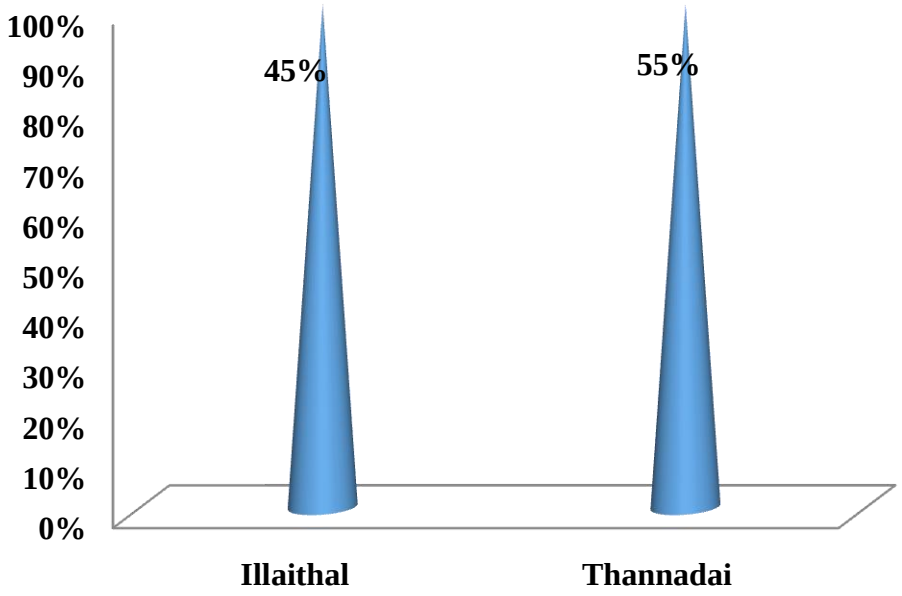
Fig -9.25.Naadi nithanam



Observation

Among sixty cases,33 patients (55%) have Vanmai pulse and 27 patients (45%) have Menmai pulse.

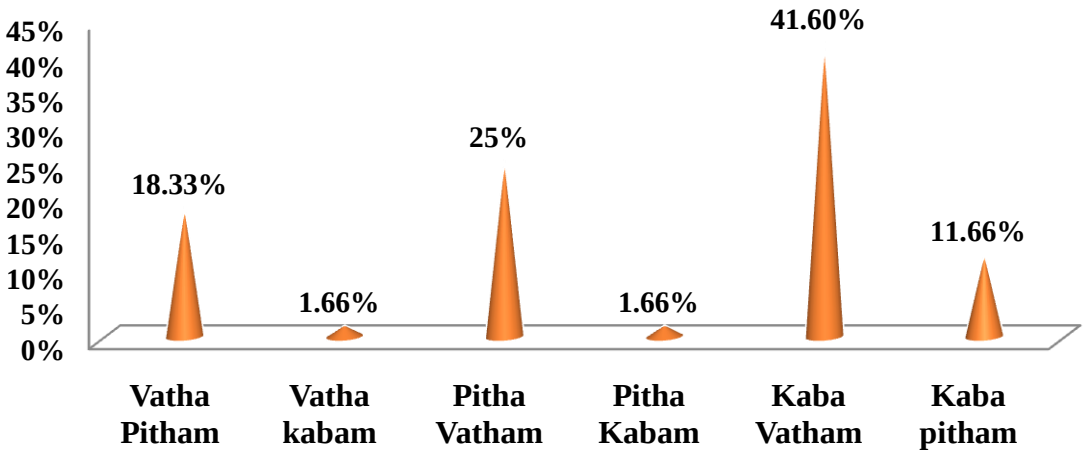
Fig - 9. 26. Naadi panbu



Observation

Among sixty cases**,** 33 patients (55%) have character of pulse is Thannadai and 27 patients (45%) have Ilaithal character in pulse.

Fig9.27. Naadi nadai



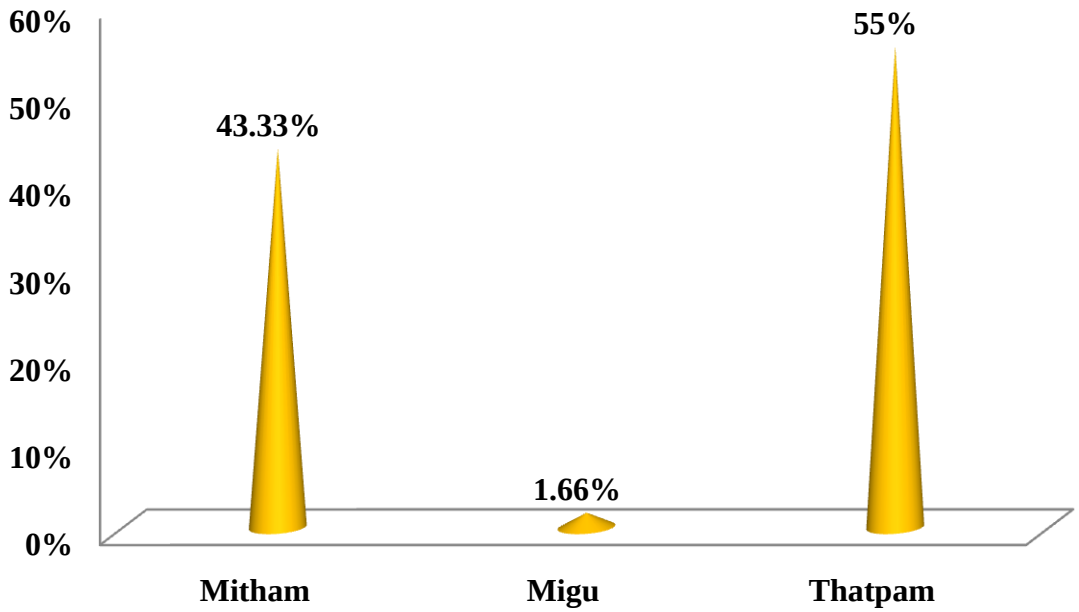
Observation

Among sixty cases, 11 patients (18.33%) have Vatha Piham, 15 cases (25%) have Pitha Vatham, 25 cases (41.60%) have Kaba Vatham, 7 patients (11.66%) have Kaba Pitham and 1.66% of cases have Vatha Kabam and Pitha Kabam**.**

Table- 9.21. Sparisam

Meikkuri		Thamaraga noi No. of cases	Percentage
Veppam	Mitham	26	43.3%
	Migu	1	1.66%
	Thatpam	33	55%
	Total	**60**	**100%**
Viyarvai	Increased	**15**	**25%**
	Reduced	1	1.66%
	Normal	44	73.3%
	Total	**60**	**100%**
Thanmai	Thodu vali	0	0%
	Udal Varatchi	0	0%
	Normal	60	100%
	Total	**60**	**100%**

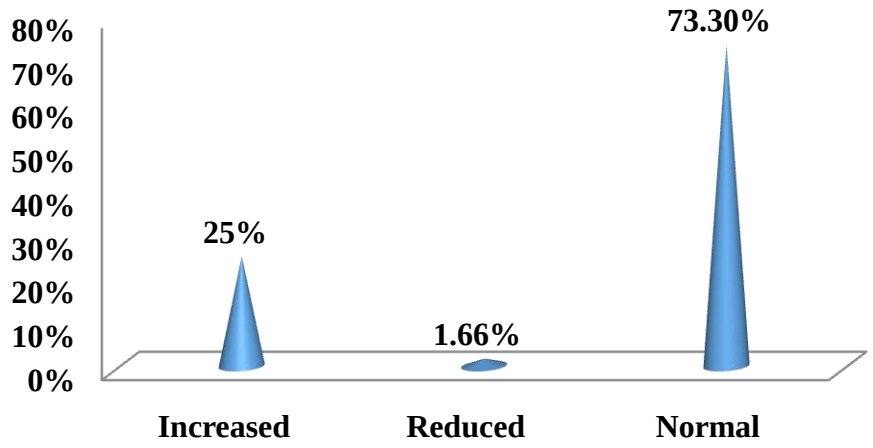
Fig 9.28. Veppam



Observation

Among sixty cases 26 patients (43.3%) have Mitha Veppam and 1 patient (1.66%) have Migu veppam, 33 patients (55%) have Thatpa sparisam.

Fig-9.29. Viyarvai



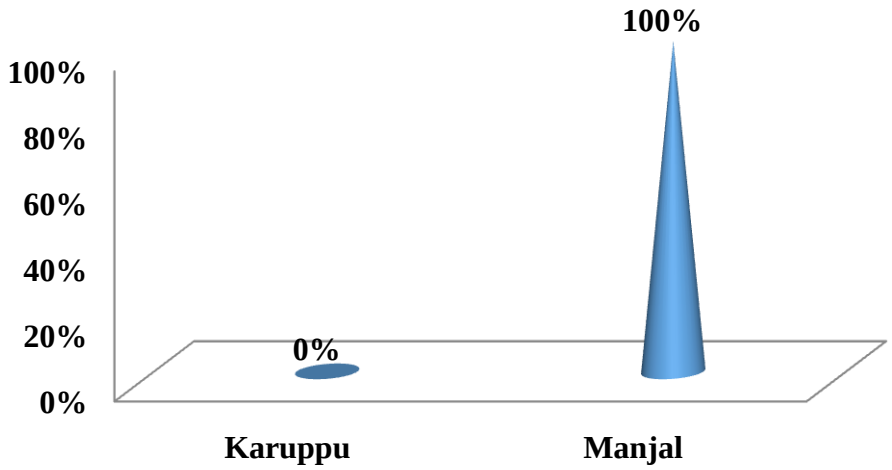
Observation

Out of 60 patients sweating was excessive in 15 cases (25%) and reduced in one case (1.66%) and normal in 44 cases (73.30%).

Table – 9.22. MALAM

Malam		**Thamaraga noi No. of cases**	**Percentage**
Niram	Karuppu	0	0
	Manjal	60	100
	Total	**60**	**100**
Thanmai	Mala Sikkal	12	20
	Siruthal	1	1.6
	Kalichchal	2	3.3
	Seetham	0	0
	Venmai	0	0
	Total	**60**	**100**

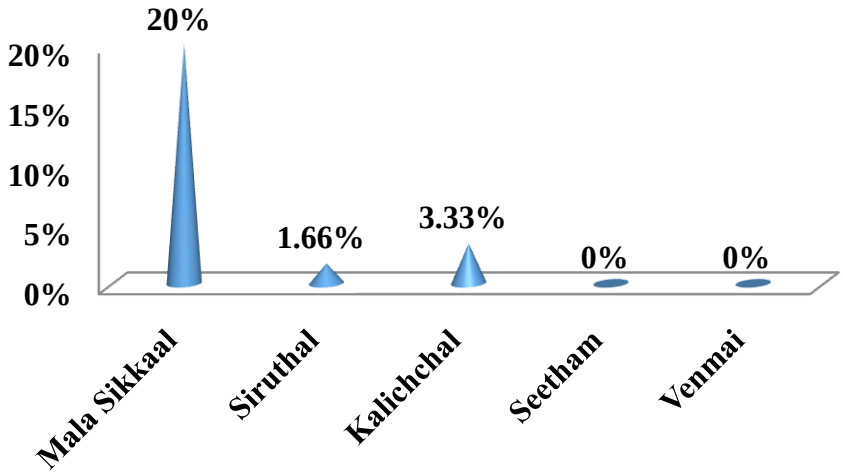
Fig9. 30. Mala Niram



Observation

Out of sixty cases, every patients have yellowish coloured stools.

Fig 9.31. Thanmai



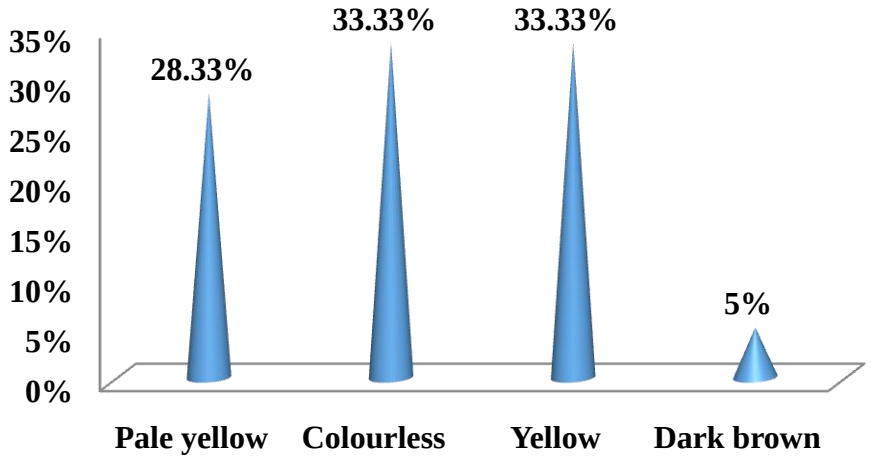
Observation

Out of sixy cases, only 12 cases (20%) of them had constipation, 1 case (1.66%) had poorly formed stools and 2 cases (3.33%) had loose stools.

Table- 9.23.MOOTHIRAM

Neerkuri		Thamaraga noi	
		No. of cases	**Percentage**
Neer Manam	Ammonia	59	98.3%
	Fruity	1	1.66%
Neer Niram	Pale yellow	17	28.33%
	Yellow	20	33.33%
	Colourless	20	33.33%
	Dark brown	3	5%
Nurai	Absent	58	96.66%
	Present	2	3.33%
Edai	Normal	56	93.33%
	High	4	6.66%
Enjal	Absent	58	96.66%
	Present	2	3.33%

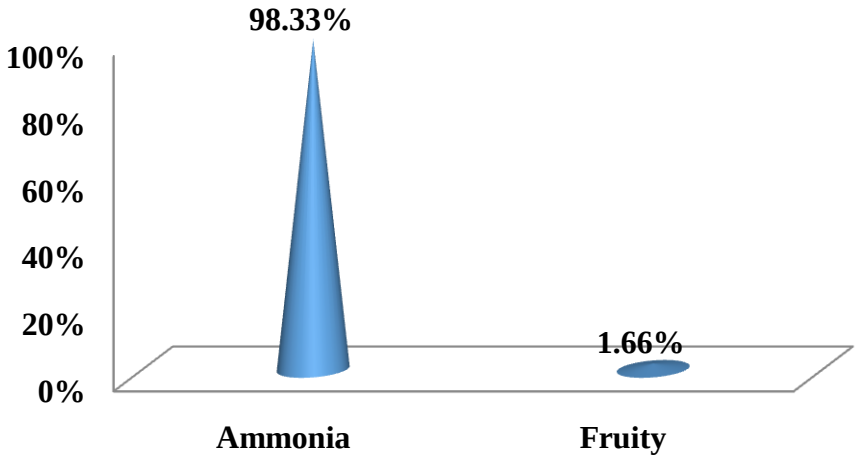
Fig 9.32. Neer Niram



Observation

Out of sixty cases, 17 cases (28.33%), 20 cases (33.33%) for both yellow and colourless urine and in one case (1.66%) it is Dark brown in colour.

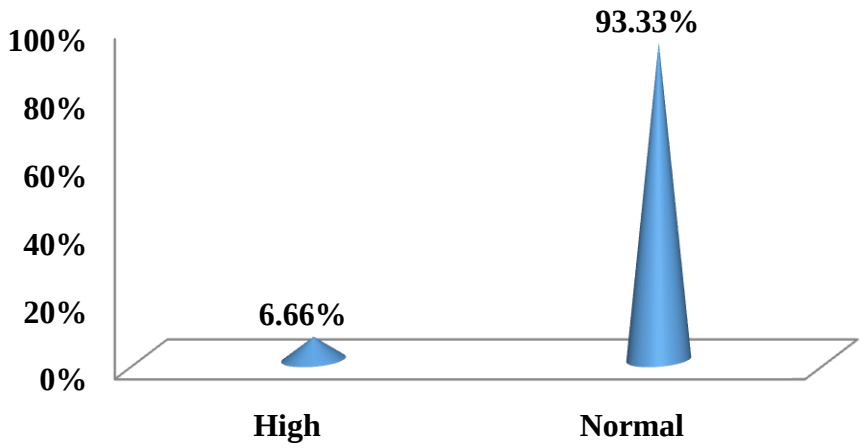
Fig 9. 33. Neer manam



Observation

Out of sixty cases, 1 case (1.66%) had fruity odour and 59 cases (98.33%) had ammonia odour.

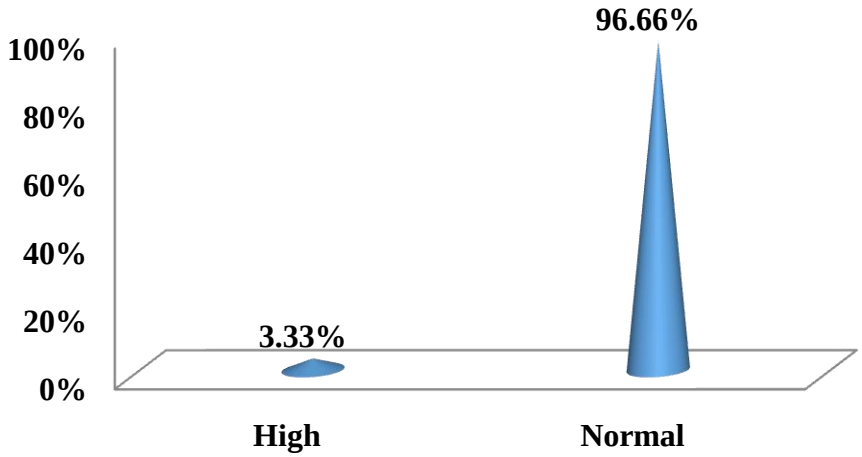
Fig 9.34. Edai



Observation

Among 60 cases, 4 cases (6.66%) had higher specific gravity and remaining 54 cases (93.33%) had lesser specific gravity.

Fig 9.35. Enjal



Observation

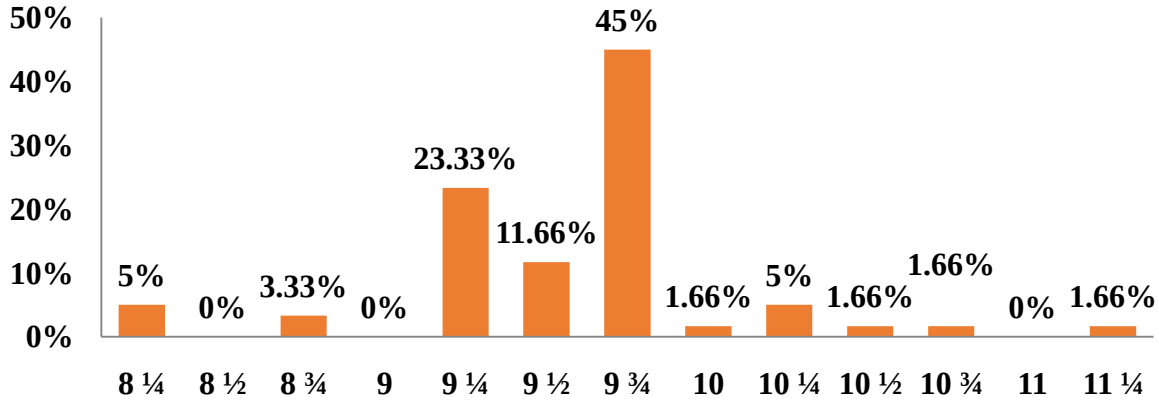
Among sixty cases, 2 patients (3.33%) had Deposits and in remaining 58 cases (96.66%) had not seen any deposits.

MANIKKADAI NOOL

Table- 9.24. MANIKKADAI NOOL

S.NO	Manikadai nool (Virakadai)	No. of cases	Percentage
1.	8 ¼	3	5%
2.	8 ½	0	0%
3.	8 ¾	2	3.33%
4.	9	0	0%
5.	9 ¼	14	23.33%
6.	9 ½	7	11.66%
7.	9 ¾	27	45%
8.	10	1	1.66%
9.	10 ¼	3	5%
10.	10 ½	1	1.66%
11.	10 ¾	1	1.66%
12.	11	0	0%
13.	11 ¼	1	1.66%
14.	Total	60	100%

Fig 9.36. Manikkadai nool



Observation

Out of sixty cases, 27 cases (45%) had 9 ¾ finger breadth. 14 cases (23.33%) had 9 ¼ finger breadth and 7 cases (11.66%) had 91/2 finger breadth. Thrre cases (5%) had 8 ¼ and 10 ¼ finger breadth.

NEIKKURI

Fig9. 37. Neikkuri - Day 1

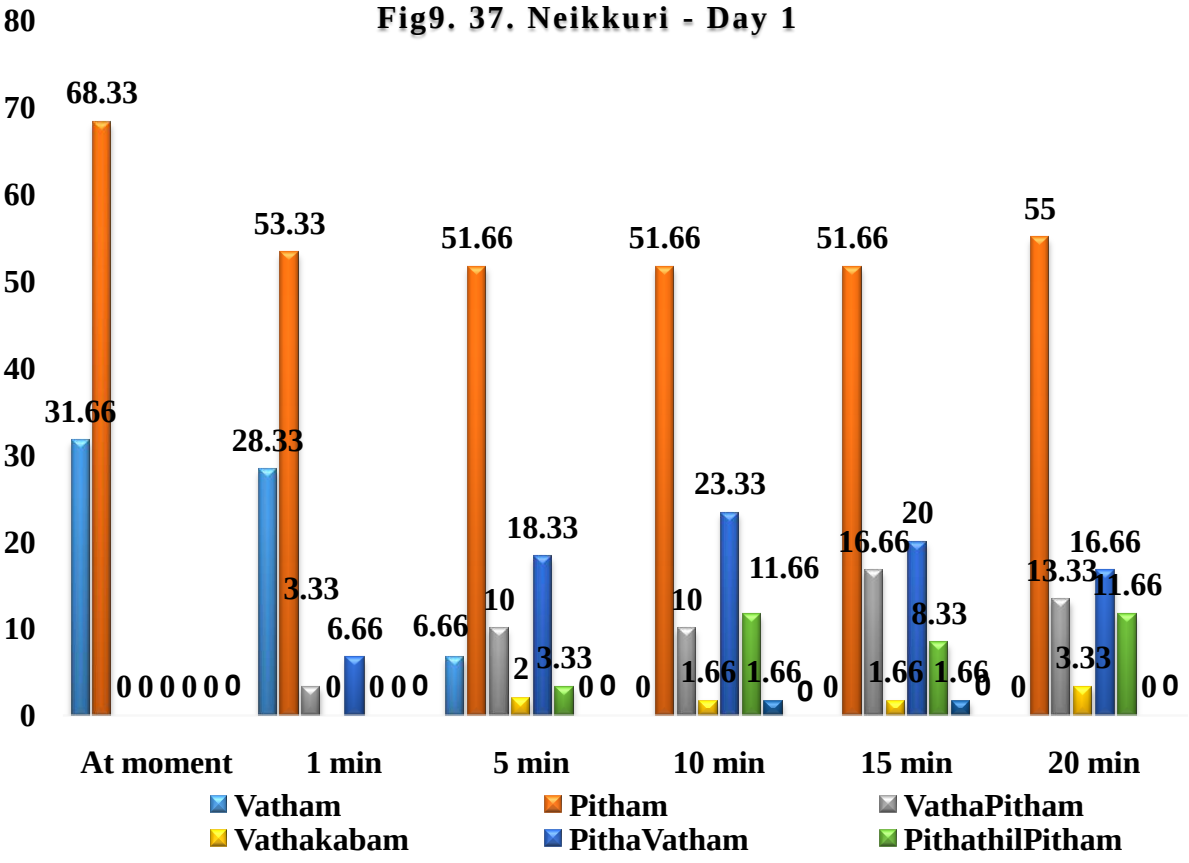


Table- 9.25. OBSERVATION – DAY 1

Pattern	At moment	1 min	5 min	10 min	15 min	20 min
Vatham	31.66%	28.33%	6.66%	0%	0%	0%
Pitham	68.33%	53.33%	51.66%	51.66%	51.66%	55%
Vatha pitham	0%	3.33%	10%	10%	16.66%	13.33%
Vatha kabam	0%	0%	2%	1.66%	1.66%	3.33%
Pitha vatham	0%	6.66%	18.33%	23.33%	20%	16.66%
Pithathil pitham	0%	0%	3.33%	11.66%	8.33%	11.66%
Pitha kabam	0%	0%	0%	1.66%	1.66%	0%
Kabam	0%	0%	0%	0%	0%	0%

Fig 9. 38. Neikkuri Day 2

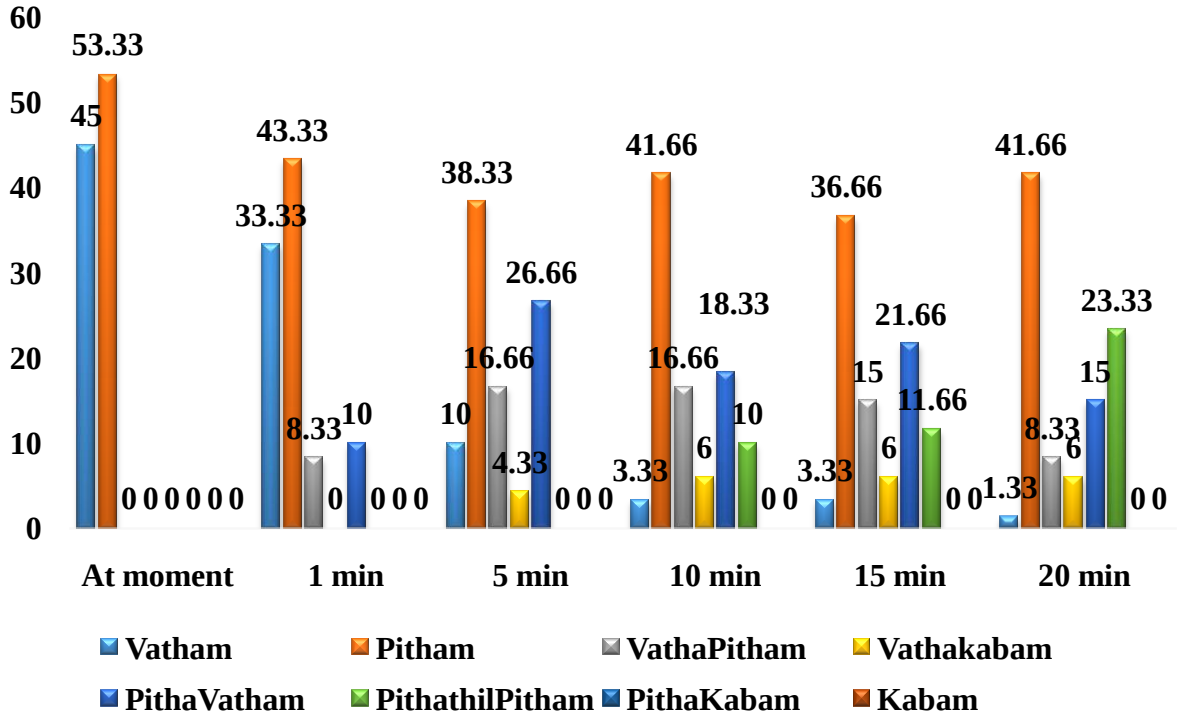


Table – 9.26.OBSERVATION – DAY 2

Pattern	At moment	1 min	5 min	10 min	15 min	20 min
Vatham	45%	33.33%	10%	3.33%	3.33%	1.33%
Pitham	53.33%	43.33%	38.33%	41.66%	36.66%	41.66%
Vatha pitham	0%	8.33%	16.66%	16.66%	15%	8.33%
Vatha kabam	0%	0%	4.33%	6%	6%	6%
Pitha vatham	0%	10%	26.66%	18.33%	21.66%	15%
Pithathil pitham	0%	0%	0%	10%	11.66%	23.33%
Pitha kabam	0%	0%	0%	0%	0%	0%
Kabam	0%	0%	0%	0%	0%	0%

Fig9.39.Neikkuri Day 3

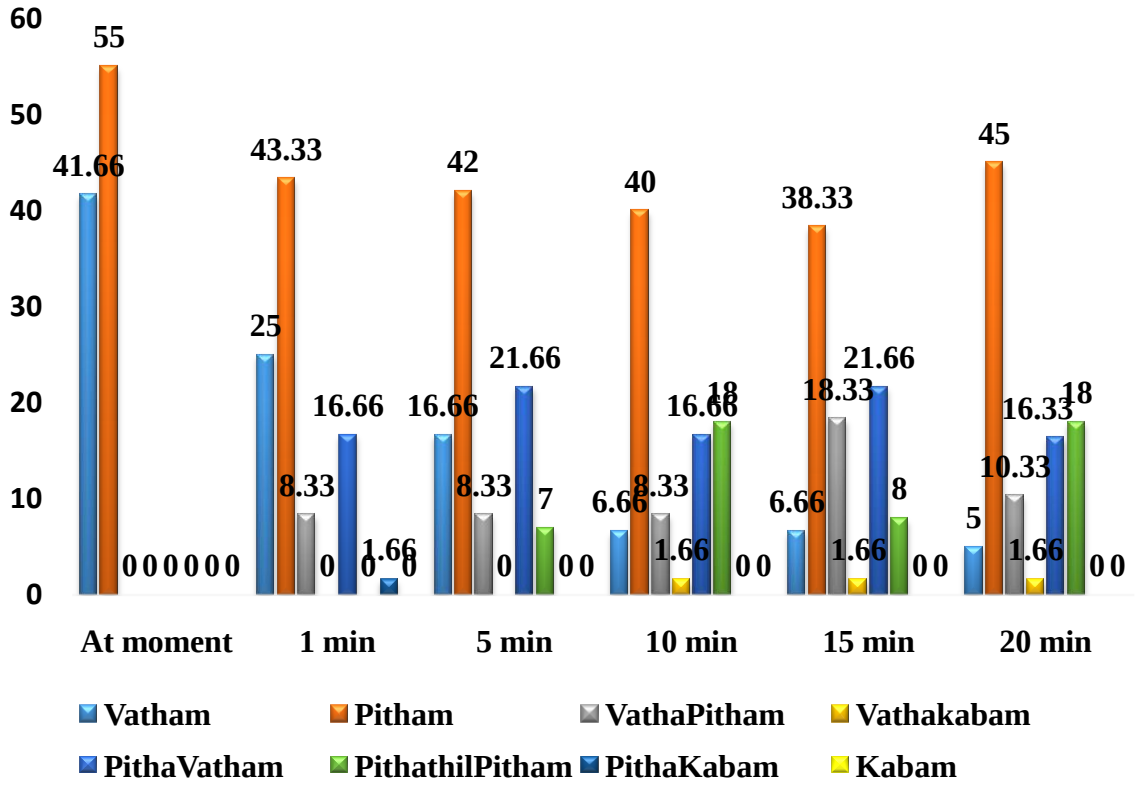


Table – 9.28. OBSERVATION – DAY 3

Pattern	At moment	min	5 min	10 min	15 min	20 min
Vatham	41.66%	25%	16.66%	6.66%	6.66%	5%
Pitham	55%	43.33%	42%	40%	38.33%	45%
Vatha pitham	0%	8.33%	8.33%	8.33%	18.33%	10.33%
Vatha kabam	0%	0%	0%	1.66%	1.66%	1.66%
Pitha vatham	0%	10%	21.66%	16.66%	21.66%	16.33%
Pithathil pitham	0%	0%	7%	18%	8%	18%
Pitha kabam	0%	0%	0%	0%	0%	0%
Kabam	0%	0%	0%	0%	0%	0%

INFERENCE

On observing the Neikkuri pattern, it is seen that *Vatham* has been manifested at the moment of oil instilled nearly at percentage of 39.44%. This pattern has been followed by *Vathapitham* in countable number of cases.

Vathakabam has been observed in first day at percentage of 3.33% and in second day it is 6%, third day it is 1.66%. Kabam is not seen much during observation.

Pitham has been obsevered more at the percentageof 59% at the moment of oil instilled and it is followed by *Pithavatham* and Pithathil pitham.

LABORATORY INVESTIGATIONS OF PATIENTS WITH THAMARAGA NOI																					
S.No	TC	DC			Hb	ESR		**Blood sugar**			**Lipid profile**				**Blood urea**	**Sr.Creat**	**SGOT**	**SGPT**	**Urine**			
		P	L	M		30 min	60 min	**Fasting**	**Post prandail**	**Random**	**Sr.Chol**	**HDL**	**LDL**	**TGL**					**Alb**	**Sug**	**Dep**	**Specific gravity**
1	5,300	46	37	0	17.1	10	20	214	323	-	136	31	83	219	24	0.8	32	37	(++)	(++)	6-7 hpf	1.025
2	7,100	75	20	5	13.4	6	12	250	419	-	207	46	113	232	25	1.1	20	32	Nil	(++)	4-6 hpf	1.025
3	7,600	55	41	4	10.3	6	12	113	143	-	181	56	100	105	22	0.8	22	30	Nil	Nil	1-3 hpf	1.025
4	6,500	60	35	5	15.3	2	4	78	167	-	107	42	50	96	20	1.5	81	94	Nil	Nil	2-3 hpf	1.025
5	5,400	61	24	0	10.5	12	30	74	100	-	144	44	73	105	38	1.4	25	27	Nil	Nil	1-2 hpf	1.025
6	8,100	60	38	0	12.4	4	12	174.2	230	-	168	46.4	91.2	132.6	12.8	0.6	16	9.5	Nil	(++)	2-4 hpf	1.015
7	8,600	73	22	0	11.8	6	12	141	267	-	151	64	82	104	43	1.3	18	10	Nil	(++)	3-5 hpf	1.02
8	8,200	60	37	0	14	20	40	162	240	-	143	46	65	97	29	1	17	36	Nil	(++)	1-2 hpf	1.025
9	8,000	68	27	5	15.3	4	8	94	98	-	155	43	75	154	23	1.9	21	26	Nil	Nil	1-2 hpf	1.015
10	8,000	59	35	6	13.1	4	10	89	111	-	178	53	96	122	38	1	24	14	Nil	Nil	1-2 hpf	1.015
11	6,500	42	53	5	14.6	-	-	124	154	-	231	46	121	128	26	1	79	122	Nil	Nil	1-2 hpf	1.02
12	8,100	62	34	4	14.8	4	8	144	164	-	228	50	119	140	16	1.2	17	27	Nil	Nil	1-2 hpf	1.015
13	5,600	61	35	3	12.5	8	18	82	91	-	215	47	109	92	37	1.5	19	13	Nil	Nil	1-2 hpf	1.015
14	5,100	65	32	3	13.4	6	12	109	145	-	118	49	47	151	15	1.2	76	17	Nil	Nil	2-3 hpf	1.015
15	7,100	66	26	8	13.1	-	-	148	276	-	110	47.2	43.2	61	27	1.07	25.4	28.6	-	--	-	1.025
16	11,000	55	28	0	16.3	2	4	87	84	-	148	40	70	122	22	1.2	26	47	Nil	Nil	1-2 hpf	1.02
17	4,000	67	31	2	10.3	32	64	133	267	-	100	37	47	81	39.6	1.8	14.3	18	-	-	-	1.02
18	6,800	56	24	3	12.8	14	30	-	-	296	219	59	107	224	15	0.9	19	15	Nil	(+)	4-5 hpf	1.015
19	8,600	60	35	5	14.9	12	26	170	321	-	147	44.3	75.1	143.8	18.8	0.88	13.8	20.2	(++)	Nil	6-8 hpf	1.015
20	6,700	71	26	2	13	4	8	201	388	-	143	45	67	141	26	1	17	17	Nil	(++)	3-5 hpf	1.03

21	9,800	77	19	3	14.6	10	20	-	-	433	216	60	107	272	22	1.2	17	13	Nil	(++)	3-5 hpf	1.02
22	10,800	57	39	4	13.2	20	42	93	201	-	139	49	70	141	21	1	14	16	Nil	Nil	2-3 hpf	1.02
23	9,600	69	27	4	13.5	14	30	176	252	-	168	51	79	67	32	1.3	9	7	Nil	(++)	1-2 hpf	1.025
24	7,700	57	33	-	15	-	-	131	297	-	112	25	63	120	26	0.7	25	31	Nil	Nil	Nil	1.015
25	6,500	62	34	4	14.4	10	22	-	-	93	123	41	57	90	17	2	18	18	Nil	Nil	1-2 hpf	1.01
26	7,000	77	17	6	11.9	20	40	-	-	103	130	30	65	78	30	1.1	29	30	Nil	Nil	2-4 hpf	1.03
27	7,100	65	31	4	15.7	2	6	-	-	138	328	56	174	332	19	1.2	20	19	Nil	Nil	3-4 hpf	1.01
28	7,400	60	31		14.4	4	8	-	-	90.8	148	54	68.3	77.2	27.7	1.04	20.3	18	Nil	Nil	2-3 hpf	1.01
29	5,700	63	34	3	10.8	10	20	-	-	306.7	174	38.9	89.6	126.9	23.4	1.26	16.4	15.8	Nil	(+)	1-2 hpf	1.015
30	7,200	67	30	3	13.9	20	40	81	109	-	162	42	79	64	47	1.1	23	33	Nil	Nil	1-2 hpf	1.025
31	7,500	69	26	5	13.1	26	52	112	201	-	159	47	75	142	27	1.1	20	17	Nil	Nil	1-2 hpf	1.015
32	9,300	70	27	3	16	2	4	-	-	129	119	42	55	252	14	1.1	22	23	Nil	Nil	1-2 hpf	1.005
33	6,100	70	25	5	8.1	-	-	74	140		173	55	97	63	33	1	20	14	Nil	Nil	4-5 hpf	1.005
34	10,100	71	27	2	14.4	20	40	-	-	385	175	44	90	109	28	1	13	20	Nil	(++)	1-2 hpf	1.015
35	9,000	78	14	5	13.2	2	4	-	-	71	169	50	90	189	18	1.8	13	16	Nil	Nil	1-2 hpf	1.01
36	7,700	70	27	3	12.1	10	20	245	420	-	152	40	82	139	19	1	10	14	Nil	(++)	2-4 hpf	1.005
37	4,800	50	45	5	15.7	2	4	235.3	379	-	276	60.9	154	103.2	8.4	1.04	15.1	19.8	Nil	(++)	2-3 hpf	1.01
38	8,100	74	21	5	15.3	2	6	-	-	123	159	41	82	133	24	1	16	18	Nil	Nil	1-2 hpf	1.03
39	9,100	55	41	4	13.6	6	14	90	95	-	223	40	129	145	18	1.4	13	11	Nil	Nil	1-2 hpf	1.01
40	9,800	70	26	4	12.5	16	32	217	391	-	167	48	83	209	34	0.56	7	2.6	Nil	(+)	2-3 hpf	1.015
41	7,900	62	33	3	12.7	50	100	74	115	-	135	38	62	108	24	1	33	17	Nil	Nil	2-4 hpf	1.015
42	8,700	75	22	3	14.2	2	4	121	215	-	110	38.1	57	106	19.7	1	14	17	Nil	Nil	2-4 hpf	1.015
43	11,900	55	38	7	15.4	8	18	191	338	-	256	55	151	173	21	0.9	28	67	Nil	(+++)	4-6 hpf	1.02
44	8,200	53	40	7	14.6	7	12	117	154	-	142	47	71	104	30	1.1	14	19	Nil	(+)	2-4 hpf	1.03

45	7,300	71	25	4	13.2	6	14	134	191	-	154	51	73	92	25	1.1	18	22	Nil	Nil	1-2 hpf	1.015
46	6,500	59	36	5	13.2	10	20	101.5	160	-	116	35.7	58.5	203.1	15.9	0.97	16	15.1	Nil	Nil	2-3 hpf	1.01
47	5,800	74	24	2	8.7	-	-	342.5	455	-	207	42.5	113	237.1	14.5	0.9	9.9	160	Nil	(++)	2-3 hpf	1.01
48	7,600	64	36	-	13.5	10	20	150	175	-	135	45	106	16.4	15.6	1.2	14	19	Nil	(+)	2-4 hpf	-
49	8,500	67	28	4	15.5	6	12	160	280	-	141	43	69	109	20	1.2	18	19	Nil	(++)	1-2 hpf	1.01
50	6,000	70	22	8	13.6	10	22	77	179	-	186	48	104	80	45	1.4	17	12	Nil	Nil	4-5 hpf	1.025
51	7,600	67	30	3	16	4	10	96	101	-	180	66	93	113	18	1.2	22	19	Nil	Nil	1-2 hpf	1.015
52	7,700	55	41	-	13.4	10	20	101.5	160	-	116	35.7	69	109	20	1.2	18	19	Nil	(++)	1-2 hpf	-
53	11,100	78	21	-	12.5	36	74	-	-	332	188	55	102	134	27	1.2	11	17	Nil	(+)	2-3 hpf	1.01
54	9,200	65	30	5	14.4	2	4	-	-	146	240	50	143	100	12	1.2	21	20	Trace	Nil	2-4 hpf	1.015
55	9,000	70	27	3	15.4	4	8	78	108	-	161	45	89	193	14	0.9	13	21	Nil	Nil	1-2 hpf	1.025
56	7,900	56	35	-	12	8	20	-	-	233	233	-	-	-	17.7	1.3	56.3	43.4	Trace	Nil	4-6 hpf	1.025
57	15,200	80	11	-	15.1	-	-	-	-	129	247	47	147	198	21	1	-	-	Trace	Nil	2-3 hpf	1.025
58	9,200	71	24	-	11.9	-	-	-	-	260	119	27	85	130	32	0.8	33	60	Nil	(+++)	3-5 hpf	1.025
59	7,200	55	41	4	15.4	4	8	-	-	75	100	32	51	156	21	1.3	14	8	Nil	Nil	1-2 hpf	1.025
60	8,400	64	34	2	14.6	24	50	183	392	-	250	52	143	40	25	1.2	21	26	Nil	(++)	1-2 hpf	1.025

CASE 1 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its shape slightly as *Pithavatham* from one minute to twenty minutes.

CASE 1 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its shape slightly as *Pithavatham* from one minute to twenty minutes.

CASE 1 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its shape slightly as *Pithavatham* from one minute to twenty minutes.

CASE NO 2– DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* from one minute to ten minutes and *Pitham* at the end.

CASE NO 2 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Vatham* shown at the moment and *Vathapitham* from one minute to fifteen minutes, *Pithathil pitham* in the end.

CASE NO 2– DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* from at the moment to one minute, *VathaKabam* from five minutes to twenty minutes.

CASE 3 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its shape slightly as *Pithavatham* from ten minute to twenty minutes.

CASE 3 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

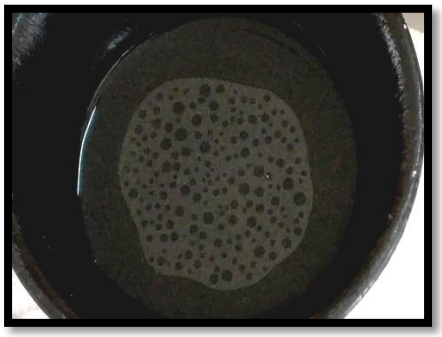
Appearance of *Pitham* at the moment which then changes its shape slightly as *Pithavatham* from ten minute to twenty minutes.

CASE 3 – DAY 3

At the moment

One minute

Five minutes



Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment which then changes to *Vathapitham* from one minute to twenty minutes.

CASE NO 4– DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment, *Pithavatham* from one minute to twenty minutes.

CASE NO 4– DAY 2

At the moment

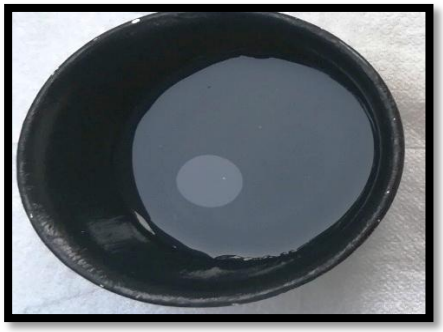
One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes



INTERPRETATION

The *Vatham* shown at the moment extending to one minute, *Vathapitham* from five to ten minutes and *Vatham* in fifteen minutes, *Pitham* at the end.

CASE NO 4 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment and remains same upto twenty minutes.

CASE NO 5 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* from one minute to ten minutes, *Pithathil pitham* at the end.

CASE NO 5 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

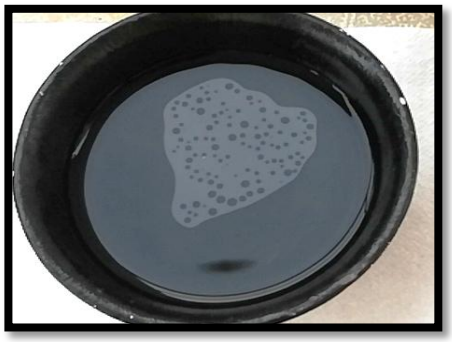
The *Pitham* shown at the moment which then changes to *Pithavatham* from one minute to twenty minutes.

CASE NO 5 – DAY 3

At the moment

One minute

Five minutes



Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment, *Vathapitham* from one minute to ten minutes and *Pithathil pitham* from fifteen minutes to twenty minutes.

CASE NO 6– DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearnce of*Pitham* remains same upto twenty minutes.

CASE NO 6 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its slight shape as *Pithavatham* upto five minutes and *Pitham* in the end.

CASE NO 6 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* from one minute to five minutes and *Pithathilpitham* at the end..

CASE NO 7– DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment which then changes to *Vathapitham* and ended with *Pithathil pitham.*

CASE NO 7– DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* from one minute to five minutes, *Pithathil pitham* at the end..

CASE 7– DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment which then changes to *Vathapitham* upto ten minutes and ended with *Pitham.*

CASE 8– DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

This patient shows a pattern of *Pitham* at the moment, *Pithavatham* from one minute to ten minutes and ended with *Pithathil pitham.*

CASE 8 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen Minutes

Twenty minutes

INTERPRETATION

The second day of the patient shows a pattern of *Vatham, Vathapitham* in one minute and ended with *Pitham.*

CASE 8 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the patient shows a pattern of *Pitham* at the moment extended upto one minute, *Pithavatham* from five minutes to twenty minutes.

CASE 9 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment extended upto one minute, *Pitham* from five minutes to twenty minutes**.**

CASE NO 9– DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Vatham* in one minute and *Vathapitham* extends from five to ten minutes, *pitham* at the end..

CASE 9 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment, *Vathapitham* in one minute and *Pitham* extended from five minutes to twenty minutes.

CASE NO 10 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* remains same upto twenty minutes.

CASE 10 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, pattern of *Pitham* at the moment extended upto one minute, *Pithavatham* from five minutes to twenty minutes.

CASE 10– DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Vatham* at the moment, *Vathapitham* from one minute to twenty minutes.

CASE 11 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment extended upto five minutes which then changes its round shape slightly as *Pithavatham* from ten to twenty minutes.

CASE 11 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its round shape slightly as *Pithavatham f*rom one minute to twenty minutes.

CASE 11– DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which then changes its round shape slightly as *Pithavatham* from one to twenty minutes.

CASE NO 12 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which extended upto ten minutes, *Pithavatham* from fifteen to twenty minutes.

CASE NO 12– DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which is extended upto twenty minutes.

CASE NO 12 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Vatham* shown at the moment extends upto one minute, *Vathapitham* in five minutes and ended with *Pitham*.

CASE 13 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment extending upto ten minutes, *Pithavatham* at fifteen minutes and twenty minutes.

CASE 13 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment extending upto ten minutes, *Pithavatham* at fifteen minutes and twenty minutes.

CASE 13 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment extending upto ten minutes, *Pithavatham* at fifteen minutes and twenty minutes.

CASE 14 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment, *Pithavatham* from five to fifteen minutes and ended in *Pitham.*

CASE 14 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment, *Pithavatham* from five to twenty minutes.

CASE 14 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

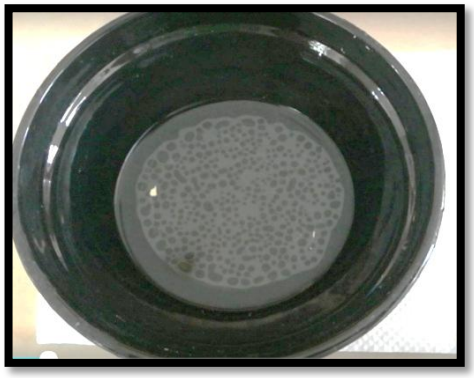
INTERPRETATION

Appearance of *Pitham* at the moment, *Pithavatham* from five to twenty minutes.

CASE 15 – DAY 1

At the moment

One minute



Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment extended upto one minute, *Pithavatham* from five to twenty minutes.

CASE 15 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Apperance of *Vatham* at the moment which is followed by *Vathapitham* from one minute to twenty minutes.

CASE 15 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Apperance of *Vatham* at the moment which is followed by *Vathapitham* from one minute to twenty minutes.

CASE 16 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment and *Vathapitham* from one minute to five minutes, *Pitham* from ten to twenty minutes.

CASE 16 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment which is followed by *Vathapitham* upto twenty minutes.

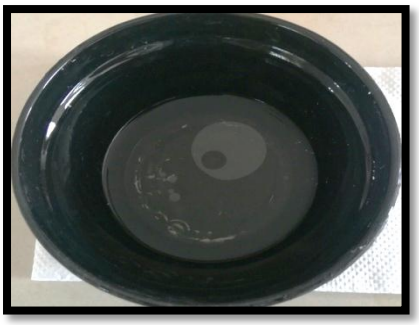
CASE 16 – DAY 3

At the moment

One minute

Five minutes

Ten minutes



Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient has shown a *Vatham* pattern at the moment which last upto five minutes, ended with *Pitham*.

CASE NO 17 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

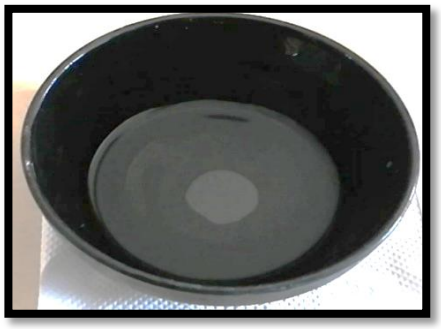
Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* in one minute and remains same upto twenty minutes.

CASE NO 17 – DAY 2

At the moment



One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* in one minute and fiveminutes, *pithathil pitham* at the end..

CASE NO 17 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* shown at the moment which then changes to *Pithavatham* in one minute and *Pithathil pitha*m from five to twenty minutes.

CASE 18 – 1 DAY

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* remains same upto twenty minutes.

CASE 18 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment, followed by *Vathapitham* extended upto five minutes, *Vatham* appeared again from ten minutes to fifteen minutes and ended with *Pitham*

CASE 18 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment which is followed by *Vathapitha*m upto five minutes, *Pitham* from ten to twenty minutes.

CASE 19 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Vatham* at the moment, which is then followed by *Vathapitham* in one minute, *Pithathil pitham*in the middle and *Pitham* from ten to twenty minutes.

CASE 19 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

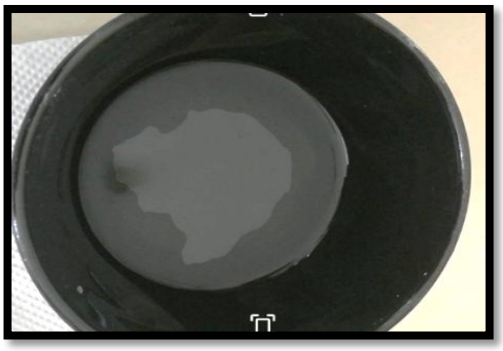
Twenty minutes

INTERPRETATION

The second day of the patient shows a pattern of *Vatham* at the moment and *Vathapitham* in one minute, ended with *Pitham.*

CASE 19 – DAY 3

At the moment



One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Vatham* at the moment extended upto five minutes and ended with*Pithathil Pitham.*

CASE 20 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment remains upto one minute, *Pithavatham* in five minutes and *Pitham* from ten to twenty minutes.

CASE 20 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* from at the moment to one minute, *Pithavatham* in five minutes and *Pitham* from ten to twenty minutes.

CASE 20 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Apperance of *Pitham* from at the moment to five minutes, *Pithathil pitham* from ten to twenty minutes.

CASE 21 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment which is followed by *Vathapitham* upto one minute and ended with *Pitham* from five to twenty minutes.

CASE 21 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Vatham* at the moment which then changes to *Vathapitham* in one minute, *Vatham* in five minutes and ended with *Pitham.*

CASE 21 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Vatham appears at the moment and *Vathapitham* in one minute which is then followed and ended with *Pitham*

CASE 22 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Pitham* appeared at the moment extended upto one minute, which is the followed by *Pithavatham* upto twenty minutes.

CASE 22 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* appeared at the moment and slight change in its round shape and manifest as *Pithavatham* from one minute to twenty minutes.

CASE 22 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* appeared at the moment which is extended upto five minutes, *Pithavatham* from ten to twenty minutes.

CASE 23 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment and followed by *Vathapitham* in one minute, *Pitham* from five to twenty minutes.

CASE 23 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Pitham* at the moment, *Pithavatham* in one minute and five minutes, *Pithathil pitham* in ten minutes, ended in *Pitham*.

CASE 23 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the patient shows a pattern of *Vatham* at the moment, *Vathapitha*m in one minute and *Pithathil pitham* from five to ten minutes which is ended in *Pitham.*

CASE 24 – DAY 1

At the moment ` ` **One minute**

Five minutes **Ten minutes**

Fifteen minutes **Twenty mineutes**

INTERPRETATION

The pattern of *Pitham* at the moment which remains same upto twenty minutes.

CASE 24 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a *Vatham* at the moment and *Vathapitha*m in one minute, *Vatham* from five to ten minutes and ended with *Pitham.*

CASE 24 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the patient shows a pattern of *Vatham* at the moment which is followed by *Vathapitham* in one minute and *Pitham* from five minutes to twenty minutes.

CASE 25 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Pitham* appeared at the moment which is followed by slight changes in the round shape and manifests as *Pithavatham* upto ten minutes, *Pitham* at fifteen minutes and twenty minutes.

CASE 26 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment which is the followed by *Vathapitham* extending upto twenty minutes.

CASE 26 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Pitham* at the moment extending upto one minute, *Pithavatham* from five minutes to ten minutes and ended with *pitham.*

CASE 26 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Pitham* at the moment, *Pithathil pitham* from five to ten minutes and ended with *Pitham.*

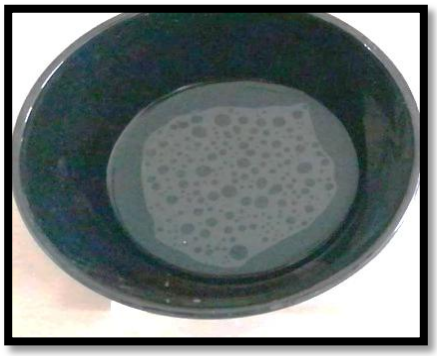
CASE 27 – DAY 1

At the moment

One minute

Five minutes

Ten minutes



Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment which is then followed by *Vathapitham* upto twenty minutes.

CASE 27 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient has shown a picture of *Vatham* at the moment extending upto one minute, *Vathakabam* from five to twenty minutes.

CASE 27 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Vatham* at the moment which extends upto twenty minutes.

CASE 28 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Vatham* appeared at the moment and is followed by *Pitham* which extends upto twenty minutes.

CASE 28 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the patient has shown a pattern of *Vatham* which is then followed by *Vathapitham* upto five minutes, *Vatham*from ten to fifteen minutes and ended in Pitham.

CASE 28 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Pitham* appeared at the moment extends upto five minutes, *Pithavatham* appears at tenth minute which extends upto twenty minutes.

CASE 29 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case appearance of *Pitham* extends through out twenty minutes.

CASE 29 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Pitham* at the moment and changes to *Pithavatham* which extends upto five minutes, *Pitham* reappeared in the end.

CASE 29 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shown a pattern of *Pitham* at the moment which then changes to *Pithavatham* in one minute and extends to twenty minutes.

CASE 30 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern shows a *Pitham* appearance at the moment upto five minutes, *Pithavatham* extends upto twenty minutes.

CASE 30 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Pitham* upto one minute, *pithavtham* in five minutes and *Pitham* from ten to twenty minutes.

CASE 30 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

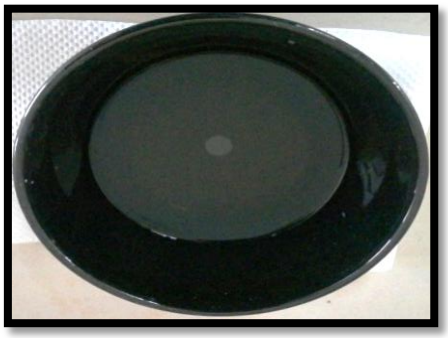
Twenty minutes

INTERPRETATION

The patient shows a pattern of *Pitham* upto one minute. *Pithavatham* extends from one minute to twenty minutes.

CASE 31 – DAY 1

At the moment



One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient shows a pattern of *Pitham* at the moment which then changes to irregular shape i.e *Pithavatham* which remains same upto twenty minutes.

CASE 31 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared upto one minute which is then followed by *Pithavatham* upto fifteen minutes and ended in *Pitham*.

CASE 31 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Pitham* upto one minute, *Pithavatham* in five minutes and *Pitham* appeared from ten to twenty minutes.

CASE 32 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Pitham* appeared at the moment and changes to *Pithavatham* which remains upto twenty minutes.

CASE 32 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* remains same upto twenty minutes.

CASE 32 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which remains same upto fifteen minutes and *Pithathil pitham* in twenty minutes.

CASE 33 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Vatham* appeared at the moment and *Vathapitham* from one minute to twenty minutes.

CASE 33 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Vatham* appeared at the moment and *Vathapitham* from one minute to twenty minutes.

CASE 33 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Vatham* appeared at the moment and *Vathapitham* from one minute to twenty minutes.

CASE 34 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment which then followed by *Pithavatham* upto fifteen minutes and ended as *Pithathil pitham*.

CASE 34 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment and *Pithavatham* from one minute to twenty minutes.

CASE 34 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

Appearance of *Pitham* at the moment which is followed *by Pithavatham* upto twenty minutes.

CASE 35 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient shows a neikkuri pattern of *Pitham* at the moment extended upto five minutes and slight change in its regular shape as *Pithavatham* which is shown upto twenty minutes.

CASE 35 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minute

Twenty minutes

INTERPRETATION

The second day of the same patient shows a pattern of *Vatham* at the moment and *Vathapitham*at the end.

CASE 35 – DAY 3

At the moment

One minute

Five minutes

INTERPRETATION

The third day of same patient shows a neikkuri pattern of *Pitham*atthe moment and ended with *Pitham*.

CASE 36 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The appearance of *Vatham* at the moment and followed by *Vathapitham* which remains upto twenty minutes.

CASE 36 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The appearance of *Vatham* at the moment and followed by *Vathapitham* which remains upto twenty minutes.

CASE 36 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The appearance of *Vatham* at the moment and followed by *Vathapitham* which remains upto twenty minutes.

CASE NO 37 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case *Vatham* shown at the moment, *Vathapitham* extends from one minute to fifteen minutes and ended in *Pithathil pitham*.

CASE NO 37 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

This shows a picture of *Vatham* at the moment and *Vathapitham* from one minute to fifteen minutes and ended in *Pithathil pitham* .

CASE NO 37 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows *Vatham* at the moment, *Vathapitham* extending from one minute to fifteen minutes and ended in showing of*Pithathil Pitham.*

CASE 38 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment which is actually followed by irregularity shape i.e *Pithavatham* upto twenty minutes.

CASE 38 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The appearance of *Pitham* from at the moment to five minutes, *Pithathil pitham* in ten to fifteen minutes and ended as *Pitham.*

CASE 38 – DAY 3

At the moment

Oneminute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows pattern of *Pitham* at the moment which is followed by *Pithavatham* upto fifteen minutes and *Pithathil pitham* in twenty minutes.

CASE 39 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment extended upto five minutes and *Pithavatham* upto twenty minutes.

CASE 39 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The *Vatham* appeared at the moment which then is followed by *Vathapitham* extended upto fifteen minutes and *Pithathil pitham* in twenty minutes.

CASE 39 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The appearance of *Pitham* upto five minutes and followed by *Pithavatham* upto fifteen minutes and ended in *Pitham.*

CASE 40 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment which then changes to irregular shape and extended as *Pithavatham* upto ten minutes and *Pitham* again in fifteen minutes and *Pithathil pitham* in twenty miutes.

CASE 40 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment which then changes to irregular shape and extended as *Pithavatham* upto ten minutes and *Pitham* again in fifteen minutes and *Pithathil pitham* in twenty miutes.

CASE 40 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The pattern of *Pitham* appeared at the moment which then changes to irregular shape and remained as *Pithavatham* upto twenty minutes.

CASE 41 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient shown a neikkuri pattern of *Pitham*at the moment extended upto fifteen minutes and *Pithavatham* from ten to fifteen minutes which then ended in *Pitham.*

CASE 41 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shown a neikkuri pattern of *Pitham* upto five minutes which then followed by irregular shape of *Pithavatham* upto fifteen minutes and ended in *Pitham.*

CASE 41 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shown a neikkuri pattern of *Pitham* which remained same upto twenty minutes.

CASE 42 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient shows a pattern of *Pitham* at the moment which is followed by *Pithavatham* extends upto fifteen minutes and *Pithathil pitham* in twenty minutes.

CASE 42 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows *Pitham* upto one minute and *Pithavatham* upto fifteen minutes and*PithathilPitham* in twenty minutes.

CASE 42 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Pitham* at the moment and *Pithavatham* upto twenty minutes.

CASE 43 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient has shown a neikkuri pattern of *Pitham* at the moment which then slowly changes to *Pithavatham* upto five minutes and *Pitham* seen from ten to twenty minutes.

CASE 43 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient has shown a pattern of *Pitham* upto fifteen minutes and *Pithathil pitham* in twenty minutes.

CASE 43 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient has shown a pattern of *Pitham* at the moment and appearance of *Pithavatham* from one minute to fifteen minutes and *Pithathil pitham* at twenty minutes.

CASE 44 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient shows *Pitham* at the moment which then changes to irregular shape of *Pithavatham* extended from one minute to fifteen minutes and again *Pitham* reappeared in twenty minutes.

CASE 44 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the patient shows *Pitham* which extends upto five minutes and *Pithavatham* from ten to twenty minutes.

CASE 45 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient shown a neikkuri pattern of *Pitham*.

CASE 45 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Pitham.*

CASE 45 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Pitham* which remains same upto ten minutes, *Pithathil pitham* at the end.

CASE 46 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, it shown the pattern of *Pitham*in the beginning, which then changes its shape to *Pithavatham* in the middle and *Pitham* in the end.

CASE 46 – DAY 2

At the moment

One minute

1Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The same case which shows patternof *Pitham*in the beginning, which then changes its shape to *Pithavatham* in the middle and *Pitham* at the end.

CASE 46 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The same case of third day picture shows *pithathil pitham* at its end.

CASE 47 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient with a known case of DM, HT, IHD (PTCA done) and neikkuri pattern shows *Vatham* at the moment, *Pitham* accompanies in the middle showing *Vathapitham*in the end.

CASE 47 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient had *Vatham* pattern at the moment and acquired *Pitham*in the end

CASE 47 - DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows *Vatham* at the moment and ended as *Pithathil Pitham.*

CASE 48 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient with known case of IHD (PTCA done) had shown *Pitham* pattern at the moment and Pitha*vatham* from one minute to twenty minutes.

CASE 48 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Vatham*at the moment and *Pithathil pitham* at the end.

CASE 48 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the patient shows a neikkuri pattern of *Pitham* at the moment and *Pithavatham* from one minute to twenty minutes.

CASE 49 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient with a known case of DM, HT, IHD(PTCA done) had complaints of dyspnoea shown a neikkuri pattern of *Pitham* at the moment and *Pithavatham* from one minute to twenty minutes.

CASE 49 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Pitham*at its beginning and *Pithavatham* from one minute to twenty minutes.

CASE 49 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of Pitham at the moment, *Pithavatham* from one minute to fifteen minutes and *Pitham* in twenty minutes.

CASE 50 – DAY 1

At the moment

One minute

`Five minutes

Ten minutes

Fifteen minutes

Twenty minuutes

INTERPRETATION

The Patient shows a neikkuri pattern of *Vatham* at the moment and changes to *Vathapitham* from one minute to twenty minutes.

CASE 50 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Eight minutes

INTERPRETATION

The second day of the same patient shows similar picture of *Vatham*as the first day.

CASE 50 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient had shown a neikkuri pattern of *Vatham*.

CASE 51 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The patient shows pattern *of Pitham*at its beginning and changes to *Pithavatham* which remains till the end.

CASE 51 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of same case shows the pattern of *Pitham*at its beginning and changes to Pithavatham which remains till the end.

CASE 51 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same case shows pattern of *pitham* in its beginning and remains till the end.

CASE 52 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patienthad shown a neikkuri pattern of *Vatham*at the moment and *VathaPitham*in one minute and *Pitham* at the end.

CASE 52 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern *of Pitham* at its beginning whichextended upto fifteen minutes and *Pithavatham* in twenty minutes.

CASE 52 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a neikkuri pattern of *Pitham*at the moment and*Pithavatham* from ten to fifteen minutes and *Pitham* in twenty minutes.

CASE 53 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient shown a neikkuri pattern of*Pitham* at the moment and *Vatham*in the middle, *Pithathil pitham* at the end.

CASE 53 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient had shown a neikkuri pattern of *Pitham* at the moment and *Pithavatham* extended from one minute to fifteen minutes and *pitham* at its end.

CASE 53 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Pitham* at the moment and *Pithavatham* in one minute, *Pithathil pitham* extended from to ten minutes and ended in *Pithavatham*.

CASE 54 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The Patient shown a neikkuri pattern of *Vatham*in the beginning which is continued by*Vathapitham* till twenty minutes.

CASE 54 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Pitham* in the moment and *Pithavatham*in the middle and *Pithathil Pitham* at the end.

CASE 54 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows aneikkuri pattern of *Vatham* at the moment and *Pitham* accompanies in the middle and in the end it manifest as *Vathapitham.*

CASE 55 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case pattern of *pitham* shown upto one minute, *Pithavatham* extended upto ten minutes, *Pitham* seen in fifteen minutes and ended in *Pithathil pitham*.

CASE 55 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows *Pitham* upto one minute and changes to *Pithavatham* which extended upto ten minutes, again *Pitham* appeared and remained till twenty miutes.

CASE 55 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient has shown *Pitham* at the moment, *Pithavatham* upto ten minutes and *Pithathil pitham* at fifteen minutes and ended as *Pitham* at twenty minutes.

CASE 56 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case pattern of *Vatham* shown at the moment continued by *Vathapitham* in one minute and five minutes, *Pithathil pitham* in ten minutes and ended in *Vatham.*

CASE 56 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the patient shows *Vatham* at the moment and *Vathapitham* in one minute, ended with *Vatham* upto twenty minutes.

CASE 56 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows a pattern of *Vatham* upto one minute and *Vathapitham* in five minutes, again *Vatham* till the end.

CASE 57 – DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The first day of the patient shown a neikkuri pattern of *Pitham* from the moment to till the end.

CASE 57 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same patient shows a neikkuri pattern of *Vatham* at the beginning and *Kabam*accompanies in the middle and hence it is*Vathakabam.*

CASE 57 – DAY 3

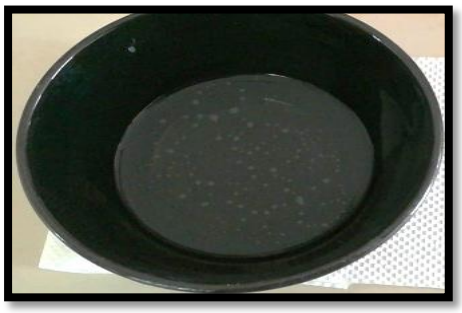
At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes



Twenty minutes

INTERPRETATION

The third day of the same patient shows aneikkuri pattern of *Vatham* in the beginning and *Kabam* accompanies in the middle and hence it is*Vathakabam.*

CASE 58- DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The first day of the patient shows a pattern of *Vatham* at the moment, which then changes to *Vathapitham* and ended in *Pitham.*

CASE 58 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the patient showspattern of *Vatham* at the moment, which then changes to *Vathapitha*m and ended in *Pithathil pitham.*

CASE 58 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the patient shows *Vatham* at the moment and *Vathapitham* from one minute to fifteen minutes, *Vatham* at the end.

CASE 59- DAY 1

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case *Pitham* showed at the moment and *Pithavatham* at one minute and five minutes, ended in *Pitham.*

CASE 59 – DAY 2

At the moment

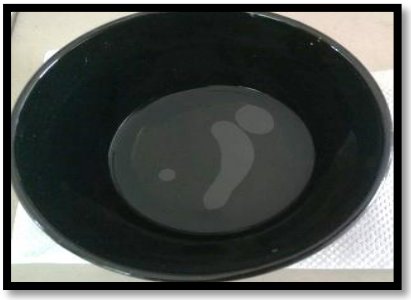
One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes



INTERPRETATION

The second day of the same patient has the pattern of *Pitham* at the moment and in one minute, *Pithavatham* from five minutes to twenty minutes.

CASE 59 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

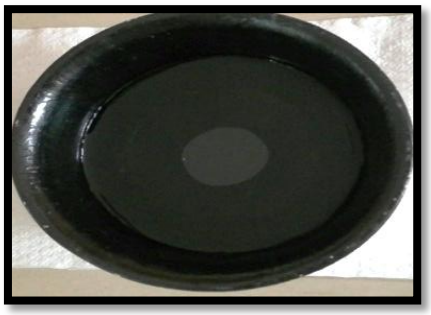
Twenty minutes

INTERPRETATION

The third day of the patient shows *Pitham* at the moment and in one minute, *Pithavatham* from five minutes to ten minutes, ended in *Pitham.*

CASE 60 – DAY 1

At the moment



One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

In this case, *Pitham* showed at the moment and *Pithavatham* extends from one minute to twenty minutes.

CASE 60 – DAY 2

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The second day of the same case shown *Vatham* at the moment and its irregularity maintained with small dots inside in one minute as *Vathapithamand Vatham* at fifth minute, extended as *Pitham* from ten to twenty minutes.

CASE NO 60 – DAY 3

At the moment

One minute

Five minutes

Ten minutes

Fifteen minutes

Twenty minutes

INTERPRETATION

The third day of the same patient shows *Vatham* at the moment, *Vathapitham* at one minute and ended in *pitham.*

10. DISCUSSION

Thamaraga Noi in Siddha commonly denotes the whole of Cardiac diseases. To narrow down in the cardiac diseases, Ischemic Heart Disease (IHD) is chosen among them. In *Pothu Maruthuvam*, Thamaraga Noi is classified into five categories – *Vali thamaraga noi,Azhal thamaraga noi*, *Iya thamaraga noi*, *Mukkutra thamaraga noi* and *Puzhu thamaraga noi*. On reviewing these categories, IHD the focus of study correlates with Iyya Thamaraga Noi.

Hypercholesterolemia is the main causative factor for causing IHD in majority of cases. Deposition of cholesterol atheromatous plaque may reduces the movement of blood to Myocardium which results in IHD. Based on this pathogenesis, *Kaba Vatham* is the first derangement among the tridoshas in early stages of IHD. i.e Atheromatous plaque which gets deposited in the vessel is inferred to be *Kabam* (natural function is instability) and as a result of accumulation, the blood supply to the myocardial tissue gets compromised and this is due to *Vatham* derangement (natural function is movement).

Totally sixty cases of established IHD is selected.Among sixty cases, 22 cases recruited are treated with Angioplasty, 9 cases who did CABG, 27 cases only are under oral treatment, 2 cases remained untreated.

Distribution of cases by Age group

Among 60 cases, 46 cases that is 76.6% belonged to the category of age group 34 – 66 years. Only 14% cases belonged to the category of age group 67 – 80 years. None belonged to the category of 0 -33 years. Middle age group patients reported more in NIS for the study condition. As per studies conducted in 2004, the prevalence rate of Coronary Heart Disease (CHD) was inbetween age group of 35 – 60 years and above.[13]

Distribution of cases by sex

Among sixty cases, 52 cases i.e 86.6% of the selected cases were males. As per studies conducted in 2004, in both urban and rural level the prevalence of CHD is higher in female group. But in this hospital based study sample size has been limited and hence it shows lesser incidence in female group.[13]

Distribution of cases by food habits

Among sixty cases, 54 cases that is 90% of them are being non – vegetarian. Non – vegetarian diet whch is considered as thamo gunam food seem to alter the normal constitution of a person and cause disease.

Distribution of cases by Socio – Economic status

Among sixty cases, 54 cases that is 90% of the selected cases were belong to Middle income group. As per studies, Cardiovascular diseases is prevalent in lower occupational class but in this hospital based study sample size has been limited and hence it shows major incidence in Middle class income group.

Distribution of cases by Personal habits

Among sixty cases, 25 pateients that is 41.6% of cases had past history of smoking and 26 cases i.e 43% of cases had past history of liquor drinking. As per Harrison's text book of medicine, smoking is considered to be a major risk factor in causing IHDbut in this hospital based study sample size has been limited and hence it shows lesser incidence for smoking. According to research that in countries where smoking has been a widespread habit, it is responsible for 25 percent of CHD deaths under 65 years of age in men.[13]

Distribution of cases by Family exposure

Among sixty cases, 14 patients of them that is 23.3% of cases had familial predisposition of IHD. As per Harrison's text book of medicine family history of premature IHD is an important indicator of increased risk, this study shows lesser incidence as this may be conducted in very small population.

Distribution of cases by Yaakai Ilakkanam

Among sixty cases, 20 of the patients i.e 33.3% of cases are *Pitha Vatha dhegi*. As per *Vaithiya Saarangiratham,* Thamaraga Noi are more prone for *Vatha kaba dhegi, Kaba dhegi, Kaba pitham dhegi*. Since the sample size is very limited, it was not able to justify the literature.

Distribution of cases by Noi Utra Kaalam

32% of cases (19 Patients) were affected with the disease during *Muthuvenir kaalam*
(Aani, Aadi).Muthuvenir kaalam has got no relation with the disease according to *Siddha literature.*

Distribution of cases by Noi Utra Nilam

93.3% of cases (56 Patients) were from *Marutha Nilam.*As per Siddha literature, *Marutha Nilam* is the best for living as there will not be occurrence of diseases. But the majority of cases were from *Marutha Nilam* and this may be due to life style modifications.

Distribution of cases by Gnanenthiriyam

Only *Mei*(13.33%)and *Kan*(16.67%) were affected more among *Gnanenthiriyam* in the patients with Thamaraga Noi. *Naaku* was affected in one patient. Among 60 cases, 41 cases (68.33%) were having normal gnanenthiriyangal. Hence Gnanenthiriyam did not show any affections.

Distribution of cases by Kanmenthiriyam

Kai, kaal, Eruvai were affected in patients with Thamaraga Noi. This is not much related with literature.

Distribution of cases by Udal Thathukkal

Saaram(55%), *Cenner* (75%), *Oon*(83.33%) was decreased in majority of cases among Udal Thathukkal, *Kozhuppu* was increased in 45 cases (75%). Enbu was decreased in 52 cases (86%). *Moolai* was increased in 21 cases (35%). *Sukkilam/ Suronitham* was not affected in any ofthe cases. As per Siddha literature, Udal Thathukkal will get affected one by one during the course of disease, here *Saaram, Senneer, Oon, Kozhuppu, Enbu, Moolai* were affected in majority of cases justifying the literature.

Distribution of cases by Uyir Thathukkal – Vatham

Pranan was affected in 40 cases (66.66%), *Udhanan* was affected in 42 cases (70%). *Viyanan* and *Samanan* was affected in all the sixty cases. *Devadaththan* was

affected in three cases (5%). *Pranan* and *Udhanan*helps in action of breathing hence due to its derangement, Dyspnoea was seen in many cases.*Viyanan*helps in movement hence due to its derangement, movement restriction was seen in many cases. *Samanan*neutralizes other four vayus, since other vayus are affected samanan was also affected in all the sixty cases. *Devadaththan* produces fatigue and hence it is affected in many cases. *Abanan* was affected in eighteen cases, which manifest as constipation.

Distribution of cases by Uyir Thathukkal – Azhal

Saathagam(90%), *Paasagam* (18.33%), *Prasakam*(18.33%) were the affected components of Pitham, any diseased one will be having difficulty in doing desired activities, this was shown by the affected subjects also which is a feature of *Saathagam.*

Distribution of cases by Uyir Thathukkal – Iyyam

Avalambagam(86.6%) and *Santhigam*(81.6%) were the only affected components of Kabam.

Distribution of cases by – Colour of tongue

There is no significance in colour observation of tongue because 42 cases (70%) among 60 cases of Thamaraga Noi have no discoloration.

Distribution of cases by – Taste in tongue

Majority of patients have normal taste sensation and hence this does not seem to be much significant affections.

Distribution of cases by – Salivation

Majority of patients have normal salivation and hence this is not much significant in this study to conclude about salivation.

Distribution of cases by Niram, Mozhi, Vizhi

Complexion

Majority of patients had yellowish complexion, colour does not show much significant affections in this hospital based study.

Mozhi

Majority of patients had Thazhantha oli. This may be due to derangement of Saaram, Cenner which usually provides energy to whole body.

Vizhi

Majority of patients i.e 43.3% of them had yellowish discoloration of eyes. 8.3% of cases had reddish discoloration of eyes. 6.6% of the patients on examinationof their eyes they showed pale conjunctiva.

Distribution of cases by – Naadi

Majority of cases had *Kaba vatha naadi* (41.6%). In the verse of *Sathaga Naadi*, Iruthu Rogam has been mentioned under Vatha kabam, the term Nenjadaippu in Kaba pitham and Iruthaya kalakkam under Pitham. Since Kaba vatham is the basic cause for occurrence of this disease and it may be reason for Kaba vatham naadi in majority of cases.

Distribution of cases by – Sparisam

Meikkuri – Veppam

Meikkuri was not so significant in this study since it is conducted in very small population.

Meikkuri – Viyarvai

25% of cases had increased sweating in this study.

Distribution of cases by – Malam

Malam – Niram

There is not much significance in this study as all sixty cases in this study had yellow discoloured feces.

Malam – Thanmai

15 cases had constipation, 1 case had poorly formed stools and 2 cases had diarrhoea and this may be due to variation in their usual diet.

Distribution of cases by – Moothiram

Colour of Urine

20 cases (33.33%) had yellow coloured urine, another 20 cases (33.33%) had colourless urine, 3 cases (5%) had dark brown urine. According to *Noi Nadal*, it is stated

that patients of Thamaraga noi will have black colour urination. But no black coloured urine was found in this study.

Neikkuri

According to Siddha literature, Vayu is the main factor in causing Thamaraga Noi ‘ *Vayuvinale Valarumappa Rudra rogam’.* In this study, Neikkuri was observed for all cases from at the moment (when oil was instilled) upto twenty minutes. *Vatham* has been shown up at the moment for three days at percentage of 39.44%.

Pitham at the moment has seen at the percentage of 59% it followed by Pitha vatham in the middle and ended with Pithathil pitham. Two cases who were only under oral medications have shown Vatha kabam pattern and one case in the same category shown Pitha kabam pattern.

This study has been pointed to Ischemic Heart Disease (IHD) and this is considered as *Kaba vatham*. Patients recruited in this study are chronic IHD and they are under medications which neutralise the deranged humor. Though *Vayu* is the main factor in causing *Thamaraga noi, Vatham* in neikkuri is seen lesser than *Pitham* and it is due to the pathological changes still remains in the heart and this belongs to the region of *Pitham* and that may be the reason for manifestation of *Pitham* in Neikkuri.

Distribution of cases by – Manikkadai Nool

Majority of patients fell within the finger breadth between 9 ½ to 10 ½ (64.98%). It is stated in Agathiyar Soodamani Kaiyiru Soothiram that the 10 finger breadth of manikkadai nool have the possibility of Angina like occurrence.

11. CONCLUSION

Neikkuri examination in *Thamaraga Noi/ Iruthu Rogam* i.e in *Iyya ThamaragaNoi – IHD* has revealed the involvement of uyirthathu or life force *'Vatham'* and *'Pitham'* been altered. This manifestation facilitates the detection of current status of the ailment and to treat it according to the deranged humours.

Based on Neikkuri examination in this study, it was observed a pattern of 'Pitham' to show up the moment the oil drop is instilled in 59% of samples. So this humour which appeared first is considered to be the predominant one to be manifested in the pattern of Neikkuri.The next pattern developing from the original pattern reveals the secondary humour involved. In that group, the *Pitham* was followed by *Pithavatham*and ended in *Pithathil pitham.* The remaining cases in this study, 39.44% of samples showed *Vatham* humour at the moment and followed by *Pitham.*This supports the literary saying '*Vaayuvinale Valarumappa Rudrarogam'.* But *Pitham,Pithavatham and Pithathil Pitham* has been observed more than *Vatham* since it is closely related to the region of Heart *(Iruthaya sthaanam)* and also due to involvement in hematological system. The deranged humours seems to be dispelled through the urine. And the remaining humour *Kabam* though naturally feeble was able to be felt through Naadi examination predominantly.

Other diagnostic parameters such as*Naadi, Sparisam,Naa, Niram, Mozhi, Vizhi and Malam* does not show much significance as this study done in very small population.

By this study, the author concludes that in the cases of *Thamaraga Noi* (*Iyya Thamaraga Noi – IHD*) the humours *Vatham* and *Pitham* get affected and therefore get excreted through urine which could be detected through Neikkuri examination. And the remaining humour *Kabam* is felt predominantly in the Naadi examination.If the study would be conducted with a larger sample size, it will yield more significant results.

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ASSESSMENT FORMS

Form I	Screening and Selection Proforma
Form II	History Proforma
Form III	Clinical Assessment
Form IV	Laboratory Investigations
Form V	Consent Form (Vernacular and English versions)
Form VI	Patient Information Sheet (Vernacular and English version)

NEIKKURI EXAMINATION IN THAMARAGA NOI / IRUTHU ROGAM
A CONDITION OF CARDIAC DISEASES
(ISCHEMIC HEART DISEASES)
FORM I - SCREENING AND SELECTION PROFORMA

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____ 4. S.No: _____

5. Name: _____ 6. Age (years): ☐ 7. Gender: M ☐ F ☐ T ☐

8. Occupation: _____ 9. Income: _____

10. Address: .....

.....

.....

11. Contact Nos: ----------

12. E-mail: ----------

13. Whether taken any other medication for the same disease previously YES ☐ NO ☐

If yes,

Name of the medicines :

Duration :

If resorted to Siddha medicine for the treatment of Rudhra rogam YES ☐ NO ☐

Reasons for resorting to Siddha medicine :

	YES	NO
(a) Cost effectiveness :	☐	☐
(b) No side effects in Siddha medicine :	☐	☐
(c) Dissatisfaction with the previous treatment :	☐	☐

INCLUSION CRITERIA

	YES	NO
1. Age: 25-70	☐	☐
2. Patients who are already diagnosed with Ischemic heart diseases	☐	☐

EXCLUSION CRITERIA

	YES	NO
• Patients with features of acute heart failure	☐	☐
• Patients with serious systemic illness	☐	☐

Date : **P.G Student** **Faculty**

FORM II - HISTORY PROFORMA

1. Sl.No of the case: _____

2. Name: _____ Height: _____ cms Weight: _____ Kg

3. Age (years): _____ DOB ☐☐ ☐☐ ☐☐☐☐
D D M M Y E A R

4. Educational Status:

1) Illiterate ☐ 2) Literate ☐ 3) Student ☐ 4) Graduate/Postgraduate ☐

5. Nature of work:

1) Sedentary work ☐

2) Field work with physical labour ☐

3) Field work Executive ☐

6. Complaints and Duration:

_____

_____

_____

_____

_____

7. History of present illness:

_____

_____

_____

8. History of Past illness:

	1. Yes	2. No
Systemic hypertension	☐	☐
Diabetes mellitus	☐	☐

Ischemic heart disease	☐	☐
Dyslipidemia	☐	☐
Jaundice	☐	☐
Bronchial asthma	☐	☐
Any drug allergy	☐	☐
Any surgeries	☐	☐
Any major illnesses	☐	☐

9. Habits:

	1. Yes	2. No
Smoker	☐	☐
Alcoholic	☐	☐
Drug Addiction	☐	☐
Betel nut chewer	☐	☐
Tea	☐	☐
Coffee	☐	☐
Milk	☐	☐

DIET HISTORY

Type of diet	V	☐	M	☐

VEGETARIAN FOODS	1. Yes	2. No
sweets	☐	☐
Ice creams	☐	☐
Junk foods	☐	☐

NON VEGETARIAN FOODS

Meats	☐	☐
Fish	☐	☐
Crab	☐	☐

DRINKS

Soft drinks	☐	☐

10. Personal history:

Marital status: Married ☐ Unmarried ☐

No. of children: Male: _____ Female: _____

Socio economic status:

11. Family history:

Others:

Date : **P.G Student** **Faculty**

FORM III - CLINICAL ASSESSMENT

1. Serial No: _____ Date : _____

2. Name: _____

3. Date of birth: | | | | | | | | |
D D M M Y E A R

4. Age: _____ years

GENERAL EXAMINATION:

1. Height: _____ cms. BMI _____ (Weight Kg/ Height m^2)

2. Weight (kg):

3. Temperature (°F):

4. Pulse rate:

5. Heart rate:

6. Respiratory rate:

7. Blood pressure:

8. Pallor:

9. Jaundice:

10. Cyanosis:

11. Lymphadenopathy:

12. Pedal edema:

13. Clubbing:

14. Jugular vein pulsation

EXAMINATION

1. Inspection

2. Palpation

3. Percussion

4. Auscultation

VITAL ORGANS EXAMINATION

	1. Normal	2. Affected
1. Heart	☐	☐
2. Lungs	☐	☐
3. Brain	☐	☐
4. Liver	☐	☐
5. Kidney	☐	☐
6. Spleen	☐	☐
7. Stomach	☐	☐

SYSTEMIC EXAMINATION:

1. Cardio Vascular System _____
2. Respiratory System _____
3. Gastrointestinal System _____
4. Central Nervous System _____
5. Uro genital System _____
6. Endocrine System _____

SIDDHA SYSTEM OF EXAMINATION

[1] ENVAGAI THERVU [EIGHT-FOLD EXAMINATION]

I. NAADI (KAI KURI) (RADIAL PULSE READING)

(a) **Naadi Nithanam (Pulse Appraisal)**

1. Kalam (Pulse reading season)

1. Kaarkaalam (Rainy season)	☐	2.Koothirkaalam (Autumn)	☐
3. Munpanikaalam (Early winter)	☐	4.Pinpanikaalam (Late winter)	☐
5. Ilavenirkaalam (Early summer)	☐	6.Muthuvenirkaalam (Late summer)	☐

2. Desam (Climate of the patient's habitat)

1. Kulir (Temperate)	☐	2. Veppam (Hot)	☐

3. Vayathu (Age)

1. 1-33yrs	☐	2. 34-66yrs	☐	3. 67-100	☐

4. Udal Vanmai (General body condition)

1. Iyyalbu (Normal built)	☐	3. Valivu (Robust)	☐	4.Melivu (Lean)	☐

5. Vanmai (Expansile Nature)

1. Vanmai	☐	2.Menmai	☐

6. Panbu (Habit)

1. Thannadai (Playing in)	☐	2. Puranadai (Playing out)	☐	3.Illaitthal (Feeble)	☐
4. Kathithal (Swelling)	☐	5.Kuthithal (Jumping)	☐	6.Thullal (Frisking)	☐
7. Azhutthal (Ducking)	☐	8. Padutthal (Lying)	☐	9. Kalatthal (Blending)	☐
10. Munnokku (Advancing)	☐	11. Pinnokku (Flinching)	☐	12. Suzhalal (Revolving)	☐
13. Pakkamnokku (Swerving)	☐				

(b) Naadi nadai (Pulse Play)

1. Vali ☐	2. Azhal ☐	3. Iyyam ☐
4. Vali Azhal ☐	5. Azhal Vali ☐	6. Iyya Vali ☐
7. Vali Iyyam ☐	8. Azhal Iyyam ☐	9. Iyya Azhal ☐

II. NAA (TONGUE)

1. Maa Padinthiruthal (Coatedness)	1. Present ☐	2. Absent ☐		
2. Niram (Colour)	1. Karuppu (Dark) ☐	2. Manjal (Yellow) ☐	3. Veluppu (Pale) ☐	
3. Suvai (Taste sensation)	1. Pulippu (Sour) ☐	2. Kaippu (Bitter) ☐	3. Inippu (Sweet) ☐	
4. Vedippu (Fissure)	1. Absent ☐	2. Present ☐		
5. Vai neer ooral (Salivation)	1. Normal ☐	2. Increased ☐	3. Reduced ☐	

III. NIRAM (COMPLEXION)

1. Karuppu (Dark) ☐	2.Manjal (Yellowish) ☐	3.Veluppu (Fair) ☐

IV. MOZHI (VOICE)

1. Sama oli (Medium pitched) ☐	2. Urattha oli (High pitched) ☐	3.Thazhantha oli (Low pitched) ☐

V. VIZHI (EYES)

1. Niram (Venvizhi) (Discolouration)

1. Karuppu (Dark) ☐	2. Manjal (Yellow) ☐
3. Sivappu (Red) ☐	4.Veluppu (White) ☐
5. No Discoloration ☐	

2. Kanneer (Tears) 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐

3. Erichchal (Burning sensation) 1.Present ☐ 2. Absent ☐

4. Peelai seruthal (Mucus excrements) 1.Present ☐ 2. Absent ☐

VI. MEI KURI (PHYSICAL SIGNS)

1. Veppam (Warmth) 1. Mitham (Mild) ☐ 2. Migu (Moderate) ☐ 3. Thatpam (Low) ☐

2. Viyarvai (Sweat) 1. Increased ☐ 2. Normal ☐ 3. Reduced ☐

3. Thodu vali (Tenderness) 1. Absent ☐ 2. Present ☐

VII. MALAM (STOOLS)

1. Niram (Color) 1. Karuppu (Dark) ☐ 2. Manjal (Yellowish) ☐

3. Sivappu (Reddish) ☐ 4. Veluppu (Pale) ☐

2. Sikkal (Constipation) 1. Present ☐ 2. Absent ☐

3. Sirutthal (Poorly formed stools) 1. Present ☐ 2. Absent ☐

4. Kalichchal (Loose watery stools) 1. Present ☐ 2. Absent ☐

5. Seetham (Watery and mucoid excrements) 1. Present ☐ 2. Absent ☐

6. Vemmai (Warmth) 1. Present ☐ 2. Absent ☐

7. History of habitual constipation 1. Present ☐ 2. Absent ☐

8. Passing of a) Mucous 1. Yes ☐ 2. No ☐

b) Blood 1. Yes ☐ 2. No ☐

VIII. MOOTHIRAM (URINE)

(a) NEER KURI (PHYSICAL CHARACTERISTICS)

1. Niram (colour)

Niramattrathu (Colourless)	☐	Paal pondra cheezh (Milky purulent)	☐	Semmanjal (Orange in colour)	☐
Sivappu (Red)	☐	Pachai (Greenish)	☐	Adarthiyana arakku (Dark brown)	☐
Prakasamana Sivappu (Bright red)	☐	Karuppu (Black)	☐	Arakku sivappu/Manjal (Brown red or yellow)	☐

2. Manam (odour)	Yes	No
Theenattram (Ammonical)	☐	☐
Pazha manam (Fruity)	☐	☐

Others : _____

3. Edai (Specific gravity)		Yes	No
Iyalbu (1.010-1.025) (Normal)	:	☐	☐
Miga thadithu irangal (>1.025) (High Specific gravity)	:	☐	☐
Laesathuvamaga irangal (<1.010) (Low Specific gravity)	:	☐	☐
Laesathuvam & Seeraga irangal (1.010-1.012): (Low and fixed Specific gravity)		☐	☐

4. Alavu (volume)		Yes	No
Iyalbu (1.2-1.5 lt/day) (Normal)	:	☐	☐
Athi neer (>2lt/day) (Polyuria)	:	☐	☐
Kuraineer (<500ml/day) (Oliguria)	:	☐	☐

5. Nurai (froth) Yes No

Niramatradhu (Clear) : ☐ ☐

Kalangalanathu (Cloudy) : ☐ ☐

6. **Enjal (deposits)** : Yes No

☐ ☐

(b) NEI KURI (oil spreading sign)

1. Aravam (Serpentine fashion) ☐
2. Mothiram (Ring) ☐
3. Muthu (Pearl beaded appear) ☐
4. Aravil Mothiram (Serpentine in ring fashion) ☐
5. Aravil Muthu (Serpentine and Pearl patterns) ☐
6. Mothirathil Muthu (Ring in pearl fashion) ☐
7. Mothirathil Aravam (Ring in Serpentine fashion) ☐
8. Muthil Aravam (Pearl in Serpentine fashion) ☐
9. Muthil Mothiram (Pearl in ring fashion) ☐
10. Asathiyam (Incurable) ☐
11. Mellena paraval (Slow spreading) ☐

IX. Others:_____

X. MANIKADAI NOOL (Wrist circummetric sign) : _____ fbs

XI. IYMPORIGAL /IYMPULANGAL

(Penta sensors and its modalities)

	1. Normal	**2. Affected**
1. Mei (skin)	☐	☐
2. Vaai (Mouth/ Tongue)	☐	☐
3. Kan (Eyes)	☐	☐

4. Mookku (Nose) ☐ ☐

5. Sevi (Ears) ☐ ☐

XII. KANMENTHIRIYANGAL /KANMAVIDAYANGAL

(Motor machinery and its execution)

	1. Normal	**2. Affected**
1. Kai (Hands)	☐	☐
2. Kaal (Legs)	☐	☐
3. Vaai (Mouth)	☐	☐
4. Eruvai (Analepy)	☐	☐
5. Karuvaai (Birth canal)	☐	☐

XIII. YAKKAI (SOMATIC TYPES)

Vatha constitution	Pitha constitution	Kaba constitution
Lean and lanky built ☐	Thin covering of bones and joints by soft tissue ☐	Plumpy joints and limbs ☐
Hefty proximities of limbs ☐	Always found with warmth, sweating and offensive body odour ☐	Broad forehead and chest ☐
Cracking sound of joints on walking ☐	Wrinkles in the skin ☐	Sparkling eyes with clear sight ☐
Dark and thicker eye lashes ☐	Red and yellow admixed complexion ☐	Lolling walk ☐
Dark and light admixed complexion ☐	Easily suffusing eyes due to heat and alcohol ☐	Immense strength despite poor eating ☐
Split hair ☐	Sparse hair with greying ☐	High tolerance to hunger, thirst and fear ☐
Clear words ☐	Intolerance to hunger, thirst and heat ☐	Exemplary character with good memory power ☐
Scant appetite for cold food items ☐	Inclination towards perfumes like sandal ☐	More liking for sweet taste ☐
Poor strength despite much eating ☐	Slender eye lashes ☐	Husky voice ☐
Loss of libido ☐	Pimples and moles are plenty ☐	
In generosity ☐		
Sleeping with eyes half closed ☐		

RESULTANT SOMATIC TYPE: _____

XIV. GUNAM

1. Sathuva Gunam ☐
2. Rajo Gunam ☐
3. Thamo Gunam ☐

XV. UYIR THATHUKKAL

A. VALI

	1. Normal	2. Affected
1. Praanan (Heart centre)	☐	☐
2. Abaanan (Matedial of muladhar centre)	☐	☐
3. Samaanan (Navel centre)	☐	☐
4. Udhaanan (Forehead centre)	☐	☐
5. Viyaanan (Throat centre)	☐	☐
6. Naahan (Higher intellectual function)	☐	☐
7. Koorman (Air of yawning)	☐	☐
8. Kirukaran (Air of salivation)	☐	☐
9. Devathathan (Air of laziness)	☐	☐
10. Dhananjeyan (Air that acts on death)	☐	☐

B. AZHAL

	1. Normal	2. Affected
1. Anala pittham (Gastric juice)	☐	☐
2. Prasaka pittham (Bile)	☐	☐
3. Ranjaka pittham (Haemoglobin)	☐	☐

4. Aalosaka pittham (Aqueous Humour) ☐ ☐

5. Saathaka pittham (Life energy) ☐ ☐

C. IYYAM

	1. Normal	**2. Affected**
1. Avalambagam (Serum)	☐	☐
2. Kilethagam (saliva)	☐	☐
3. Pothagam (lymph)	☐	☐
4. Tharpagam (cerebrospinal fluid)	☐	☐
5. Santhigam (Synovial fluid)	☐	☐

XVI. UDAL THATHUKKAL

1. SAARAM (CHYLE)

INCREASED		DECREASED	
Loss of appetite	☐	Loss weight	☐
Excessive salivation	☐	Tiredness	☐
Loss of perseverance	☐	Dryness of the skin	☐
Excessive heaviness White musculature	☐	Diminished activity of the sense organs	☐
Cough, dysponea, excessive sleep	☐		
Weakness in all joints of the body	☐		

SAARAM: INCREASED ☐ DECREASED ☐

2. CENNEER (BLOOD)

INCREASED		DECREASED	
Boils in different parts of the body	☐	Anemia	☐
Anorexia	☐	Tiredness	☐
Mental disorder	☐	Neuritis	☐
Spleenomegaly	☐	Lassitude	☐
Colic pain	☐	Pallor of the body	☐
Increased pressure	☐		
Reddish eye and skin	☐		
Jaundice	☐		
Haematuria	☐		

CENNEER: INCREASED ☐ DECREASED ☐

3. OON (MUSCLE)

INCREASED		DECREASED	
Cervical lymphadenitis	☐	Impairment of sense organs	☐
Vernical ulcer	☐	Joint pain	☐
Tumour in face ,abdomen, thigh, genitalia	☐	Jaw, thigh and genitalia gets shortened	☐
Hyper muscular in the cervical region	☐		

OON: INCREASED ☐ DECREASED ☐

4. KOZHUPPU (ADIPOSE TISSUE)

INCREASED		DECREASED	
Cervical lymph adenitis	☐	Pain in the hip region	☐
Vernical ulcer	☐	Disease of the spleen	☐
Tumour in face, abdomen, thigh, genitalia	☐		
Hyper muscular in the cervical region	☐		
Dyspnoea	☐		
Loss of activity	☐		

KOZHUPPU: INCREASED ☐ DECREASED ☐

5. ENBU (BONE)

INCREASED		DECREASED	
Growth in bones and teeth	☐	Bones diseases	☐
		Loosening of teeth	☐
		Nails splitting	☐
		Falling of hair	☐

ENBU: INCREASED ☐ DECREASED ☐

6. MOOLAI (BONE MARROW)

INCREASED		DECREASED	
Heaviness of the body	☐	Osteoporosis	☐
Swollen eyes	☐	Sunken eyes	☐
Swollen phalanges chubby fingers	☐		
Oliguria	☐		
Non healing ulcer	☐		

MOOLAI: INCREASED ☐ DECREASED ☐

7. SUKKILAM / SURONITHAM (SPERM OR OVUM)

INCREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)		DECREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)	
Infatuation and lust towards women / men	☐	Failure in reproduction	☐
Urinary calculi	☐	Pain in the genitalia	☐

SUKKILAM/SURONITHAM: INCREASED ☐ DECREASED ☐

XVII. MUKKUTRA MIGU GUNAM

I. Vali Migu Gunam	**1. Present**	**2. Absent**
1. Emaciation	☐	☐
2. Complexion – blackish	☐	☐
3. Desire to take hot food	☐	☐
4. Shivering of body	☐	☐
5. Abdominal distension	☐	☐
6. Constipation	☐	☐

7. Insomnia ☐ ☐

8. Weakness ☐ ☐

9. Defect of sense organs ☐ ☐

10. Giddiness ☐ ☐

11. Lake of interest ☐ ☐

II. Pitham Migu Gunam	**1. Present**	**2. Absent**
1. Yellowish discolouration of skin	☐	☐
2. Yellowish discolouration of the eye	☐	☐
3. Yellow coloured urine	☐	☐
4. Yellowishness of faeces	☐	☐
5. Increased appetite	☐	☐
6. Increased thirst	☐	☐
7. Burning sensation over the body	☐	☐
8. Sleep disturbance	☐	☐

III. Kapham migu gunam	**1. Present**	**2. Absent**
1. Increased salivary secretion	☐	☐
2. Reduced activeness	☐	☐
3. Heaviness of the body	☐	☐
4. Body colour – fair complexion	☐	☐
5. Chillness of the body	☐	☐
6. Reduced appetitie	☐	☐
7. Eraippu	☐	☐
8. Increased sleep	☐	☐

XVIII. NOIUTRA KALAM

1. Kaarkaalam (Aug15-Oct14) ☐ 2.Koothirkaalam (Oct15-Dec14) ☐

3. Munpanikaalam (Dec15-Feb14) ☐ 4.Pinpanikaalam (Feb15-Apr14) ☐

5. Ilavanirkaalam (Apr15-June14) ☐ 6.Muthuvenirkaalam (June15-Aug14) ☐

XIX. NOI UTRA NILAM

1. Kurunji (Hilly terrain) ☐ 2. Mullai (Forest range) ☐ 3. Marutham (Plains) ☐

4. Neithal (Coastal belt) ☐ 5. Paala (Desert) ☐

XX. Date of Birth ☐☐ ☐☐ ☐☐☐☐

XXI. Time of Birth ☐ AM ☐ PM ☐

XXII. Place of Birth: _____

XXIII. Rasi (Zodiac Sign)

1. Mesam ☐ 2. Rishabam ☐ 3.Midhunam ☐

4. Katakam ☐ 5. Simmam ☐ 6.Kanni ☐

7.Thulam ☐ 8.Viruchiham ☐ 9.Dhanusu ☐

10. Maharam ☐ 11.Kumbam ☐ 12. Meenam ☐

XXIV. **Natchathiram(birth stars):**

1. Aswini ☐	2.Barani ☐	3.Karthikai ☐
4.Rohini ☐	5.Mirugaseeradam ☐	6. Thiruvathirai ☐
7. Punarpoosam ☐	8. Poosam ☐	9. Ayilyam ☐
10. Makam ☐	11.Pooram ☐	12. Utthiram ☐
13. Astham ☐	14.Chithirai ☐	15. Swathi ☐
16. Visakam ☐	17. Anusam ☐	18.Kettai ☐
19 Moolam ☐	20. Pooradam ☐	21. Uthiradam ☐
22.Thiruvonam ☐	23.Avittam ☐	24. Sadayam ☐
25. Poorattathi ☐	26.Uthirattathi ☐	27. Revathy ☐

Date : **P.G Student** **Faculty**

FORM-IV-LABORATORY INVESTIGATIONS

1. O.P No: _____ Lab.No_____ Serial No_____

2. Name: _____

3.Date of birth : | | | | | | | | |
D D M M Y E A R

4. Age : _____ years

5. Date of assesssment: _____

BLOOD

1. TC _____ Cells/cu mm

2. DC
P___% L _____% E _____% M _____% B_____%

3. Hb _____ gms%

4. ESR At 30 minutes _____ mm At 60 minutes _____mm

5. Blood Sugar- F_____mgs%

6. Blood Sugar- PP _____mg%

7. Serum Cholesterol _____mgs %

8. HDL _____ mgs%

9. LDL _____mgs%

10. Triglycerides _____mgs%

11. SGOT _____

12. SGPT _____

13. Blood Urea _____mgs%

14. Serum Creatinine _____mgs%

URINE

1. Neerkuri _____
2. Neikuri _____
3. Sugar F&PP _____
4. Albumin _____
5. Deposits _____

RADIOLOGICAL INVESTIGATIONS

1. Chest X-Ray

SPECIAL INVESTIGATIONS (If possible)

1. Treadmill test / Coronary Angiogram/ Echocardiography
2. Serum Troponin.
3. Serum Homocysteine.

Date : **P.G Student** **Faculty**

FORM V - INFORMED WRITTEN CONSENT FORM

I ……..exercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled " Neikkuri Examination in Thamaraga Noi/ Iruthu Rogam – A condition of Cardiac diseases (Ischemic Heart Diseases). I may be asked to give urine and blood samples during the study

I have been informed about the study to my satisfaction by the attending investigator about the purpose of this trial, the nature of study and the laboratory investigations. I also give my consent to publish my study results in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

Signature /thumb impression of the patient :

Date :

Name of the patient :

Signature of the investigator :

Date :

Head of the Department :

“ தமரக நோய் / இருத்துரோகம் - நெய்க்குறி பற்றிய ஓர் ஆய்வு”

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் □ ந்த ஆய்வை குறித்த அனைத்து விபரங்களையும் நோயாளிக்கு புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி :

கையொப்பம் :

□ டம் :

பெயர் :

நோயாளியின் ஒப்புதல்

நான், _____என்னுடைய சுதந்திரமாக தேர்வு செய்யும் உரிமையைக் கொண்டு □ ங்கு தலைப்பிடப்பட் “ தமரக நோய் / இருத்துரோகம் - நெய்க்குறி பற்றிய ஓர் ஆய்வு” நோயை கணிப்பதற்கான மருத்துவ ஆய்விற்கு என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

என்னிடம் □ ந்தமருத்துவ ஆய்வின் காரணத்தையும், மருத்துவ ஆய்வுக்கூட பரிசோதனைகள் பற்றியும் திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் □ ந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல், எப்பொழுது வேண்டுமானாலும் □ ந்த ஆய்விலிருந்து என்னை விடுவித்து கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

தேதி :

கையொப்பம் :

□ டம் :

பெயர் :

தேதி :

சாட்சிக்காரர் கையொப்பம் :

□ டம் :

பெயர் :

உறவுமுறை :

NEIKKURI EXAMINATION IN THAMARAGA NOI / IRUTHU ROGAM
A CONDITION OF CARDIAC DISEASES
(ISCHEMIC HEART DISEASE)
FORM VI - PATIENT INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess the diagnostic methods in Siddha methodology and neikuri examination in Iruthu rogam patients. Knowledge gained from this study would be of benefit to patients suffering from such conditions for the diagnosis and prognosis.

STUDY PROCEDURE:

You will be interviewed and examined as OP and IP patients at the study centre. At the first visit the physician will conduct a brief physical examination and assess the condition followed by Envagai thervu and routine blood and urine analysis. After matching the inclusion criteria you will be included in this study and you will be examined on the basis of Envagai thervu.

POSSIBLE RISK:

During this study there may be a minimum pain to you while drawing blood sample.

CONFIDENTIALLITY:

Your medical records will be treated with confidentiality and will be revealed only to other doctors / scientists. The results of this study may be published in a scientific journal, but you will not be identified by your name.

YOUR PARTICIPATION AND YOUR RIGHTS:

Your participation in this study is voluntary and you may be withdrawn from this study anytime without having to give reasons for the same. You will be informed about the findings that occur during the study. If you do agree to take part in this study, your health record will need to made available to the investigators. If you don’t wish to

participate at any stage, the level of care you receive will in no way to be affected. The Ethics committee
cleared the study for undertaking at OPD and IPD, NIS.

Should any question arise with regards to this study, you contact following person.

P.G Student:
Dr. Geetha. T, II Year
Department of Noi Naadal
National Institute of Siddha
Chennai-600 047.

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை-47.

நோய் நாடல் துறை

தமரக நோய் / இருத்துரோகம் - நெய்க்குறி பற்றிய ஓர் ஆய்வு"

நோயாளியின் தகவல் படிவம்

ஆய்வின் நோக்கமும் பயனும்:

தாங்கள் பங்கேற்க்கும் இவ்வாய்வு "தமரக நோய் / இருத்துரோகம் - நெய்க்குறி பற்றிய ஓர் ஆய்வு" சித்த மருத்துவ முறையில் நோயை கணிப்பதற்கான ஓர் ஆய்வுமுறை. - வ்வாய்வு தங்களின் நோய்கணிப்பை பற்றியும் நோயின் போக்கை பற்றியும் அறிய உதவும்.

ஆய்வு முறை:

தாங்கள் நேர்காணல் மற்றும் பரிசோதனைகளின் மூலம் உள்நோயாளி, வெளிநோயாளி பிரிவில் ஆய்வு செய்யப்படுவீர்கள். முதல் நேர்காணலின்போது ஆய்வாளரால் உடல் பரிசோதனை, நீர், - ரத்தம், மற்றும் மலம் பரிசோதனை செய்து குறிப்பிட்ட குறிகுணங்கள் - ருப்பின் - வ்வாய்விற்காக எடுத்துக்கொள்ளப்படுவீர்கள்.

நேரும் உபாதைகள்:

- வ்வாய்வில் - ரத்த பரிசோதனைக்காக - ரத்தம் எடுக்கும்போது சிறிதளவு வலி ஏற்படலாம்.

மந்தணம் :

தங்களின் மருத்துவ ஆவணங்கள் அனைத்தும் மருத்துவர், ஆய்வாளர் அல்லாத பிறரிடம் தெரிவிக்கப்படமாட்டாது.

நோயாளியின் பங்களிப்பும் உரிமைகளும்:

- வ்வாய்வில் தங்களின் பங்கேற்பு தன்னிச்சையானது. - வ்வாய்வில் தாங்கள் ஒத்துழைக்க - யலவில்லையெனில் எப்பொழுது வேண்டுமானாலும் காரணம் எதுவும் கூறாமல் விலகிக்கொள்ளலாம். - வ்வாய்வின்போது அறியப்படும் தகவல்கள் தங்களுக்கு தெரிவிக்கப்படும். நோயாளியின் ஒப்புதலுக்கிணங்க நோய்கணிப்பு விவரங்களை ஆய்வாளர் பயன்படுத்திக்கொள்வார். நோயாளி ஆய்வினிடையே ஒத்துழைக்க மறுத்தாலும் எந்த நிலையிலும் நோயாளியை கவனிக்கும் விதம் பாதிக்கப்பட மாட்டது. நிறுவன நெறிமுறை குழுமம் (Institutional Ethical committee) மேற்கண்ட ஆய்வினை மேற்கொள்ள ஒப்புதல் அளித்துள்ளது.

ஆய்வு குறித்த சந்தேகங்கள் - ருப்பின் கீழ்கண்ட நபரை தொடர்பு கொள்ளவும்.

பட்டமேற்படிப்பாளர் :
த.கீதா(இரண்டாம் வருடம்)
நோய் நாடல் துறை
தேசிய சித்த மருத்துவ நிறுவனம்,
சென்னை-47.
Ph.No- 9500985601

सत्यमेव जयते

Ministry of AYUSH

NATIONAL INSTITUTE OF SIDDHA

Ministry of AYUSH, Government of India

Tambaram Sanatorium, Chennai - 600 047.

WORKSHOP ON
RESEARCH METHODOLOGY & BIOSTATISTICS

This is to certify that

Dr. T. GEETHA

has participated in the above Workshop held from 16.04.2018 to 20.04.2018 conducted by the

Dept. of Noi Naadal, at National Institute of Siddha, Tambaram Sanatorium, Chennai-600 047.

Dr. G.J. Christian
Coordinator
HoD, Dept. of Noi Naadal,
National Institute of Siddha

Prof.Dr.V.Banumathi
Director,
National Institute of Siddha
Chennai – 600 047.

NATIONAL INSTITUTE OF SIDDHA

राष्ट्रीय सिद्ध संसथान -

Ministry of AYUSH - आयुष मंत्रालय

GOVERNMENT OF INDIA-भारत सरकार

TAMBARAM SANATORIUM, CHENNAI -600 047 -ताम्बरम सनटोरियम चेन्नई -600 047

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ईमेल: nischennaisiddha@yahoo.co.in वेब :www.nischennai.org

F.No.NIS/6-20/Res/IEC/17-18 Date: 28-12-2017

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator: Dr.T.Geetha, M.D(S) – II year, Department of Noi Naadal - Dissertation –	
Protocol title: Neikuri examination in **THAMARAGA NOI / IRUTHU ROGAM** a condition of cardiac diseases **(ISCHEMIC HEART DISEASES)**	
Documents filed	1) Protocol, 2) Data Collection forms 3) Patient Information Sheet 4) Consent form 5) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	**Yes**
Informed consent documents	**Yes**
Any other documents	**-**
Date of IEC approval & its number	**NIS/13-IEC/2017-1-20/ 22-11-2017**

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, Review periodically, any SAE occurring in the course of the study, any changes in the protocol and submission of final report

Chairman

NATIONAL INSTITUTE OF SIDDHA ★ CHENNAI 600 047

Member Secretary

Clinical Trial Details (PDF Generation Date :- Sun, 14 Jul 2019 15:28:03 GMT)

CTRI Number	CTRI/2018/04/013119 [Registered on: 09/04/2018] - **Trial Registered Prospectively**
Last Modified On	09/04/2018
Post Graduate Thesis	Yes
Type of Trial	Observational
Type of Study	An Analytical open label single centric study
Study Design	Other
Public Title of Study	Urine examination in cardiac diseases
Scientific Title of Study	Neikuri examination in Thamaraga Noi/Iruthu Rogam A condition of cardiac diseases(Ischemic Heart Diseases)

Secondary IDs if Any

Secondary ID	Identifier
NIL	NIL

Details of Principal Investigator or overall Trial Coordinator (multi-center study)

Details of Principal Investigator	
Name	TGeetha
Designation	Pg scholar
Affiliation	
Address	National Institute of Siddha Tambaram Sanatorium Chennai Chennai TAMIL NADU 600047 India
Phone	9500985601
Fax	
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Details Contact Person (Scientific Query)

Details Contact Person (Scientific Query)	
Name	DrMRamamurthy
Designation	Lecturer
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Details Contact Person (Public Query)

Details Contact Person (Public Query)	
Name	TGeetha
Designation	Pg scholar
Affiliation	National Institute of Siddha
Address	National Institute of Siddha Tambaram Sanatorium Chennai Chennai TAMIL NADU 600047 India
Phone	9500985601
Fax	
Email	mailtodr.geetha@gmail.com

Source of Monetary or Material Support

Source of Monetary or Material Support
> National Institute of Siddha Hospital

Primary Sponsor

Primary Sponsor Details	
Name	TGeetha
Address	National Institute of Siddha Tambaram Sanatorium Chennai-47
Type of Sponsor	Research institution

Details of Secondary Sponsor

Name	Address
NIL	NIL

Countries of Recruitment

List of Countries
India

Sites of Study

Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
TGeetha	National institute of Siddha	Department of NoiNaadal Op Room number 5 Chennai TAMIL NADU	9500985601 9500985601 mailtodr.geetha@gmail.com

Details of Ethics Committee

Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
Institutional Ethical committee	Approved	22/11/2017	No

Regulatory Clearance Status from DCGI

Status	Date
Not Applicable	No Date Specified

Health Condition / Problems Studied

Health Type	Condition
Patients	Patients who are already diagnosed with Ischemic heart disease
Healthy Human Volunteers	Subjects with no systemic illness

Intervention / Comparator Agent

Type	Name	Details
Intervention	Not applicable	Not applicable

Inclusion Criteria

Inclusion Criteria	
Age From	25.00 Year(s)
Age To	70.00 Year(s)
Gender	Both
Details	Patients who are already diagnosed with Ischemic heart disease.

Exclusion Criteria

Exclusion Criteria	
Details	Patients with features of acute heart failure. Patients with serious systemic illness.

Method of Generating Random Sequence	Not Applicable
Method of Concealment	Other
Blinding/Masking	Open Label

Primary Outcome

Outcome	Timepoints
Arriving at a conclusion about a specific Neikuri patterns for Thamaraga Rogam which may serve as a clue in diagnosis or prognosis.	Arriving at a conclusion about a specific Neikuri patterns for Thamaraga Rogam which may serve as a clue in diagnosis or prognosis.

Secondary Outcome

Outcome	Timepoints
Categorisation of Thamaraga Rogam under	Categorisation of Thamaraga Rogam under

	humoral basis / humoral basis
Target Sample Size	**Total Sample Size=**60 **Sample Size from India=**60 **Final Enrollment numbers achieved (Total)=**Applicable only for Completed/Terminated trials **Final Enrollment numbers achieved (India)=**Applicable only for Completed/Terminated trials
Phase of Trial	Phase 1
Date of First Enrollment (India)	14/04/2018
Date of First Enrollment (Global)	No Date Specified
Estimated Duration of Trial	**Years=**1 **Months=**6 **Days=**10
Recruitment Status of Trial (Global)	Not Applicable
Recruitment Status of Trial (India)	Not Yet Recruiting
Publication Details	Neikuri examination in Thamaraga Noi/Iruthu Rogam A condition of cardiac diseases (Ischemic Heart Diseases).
Brief Summary	Collection of urine sample for Neikuri in glass bowl.Then instill a drop of gingerly oil using a stick and observe the nature of spreading of oil in urine for 3 minutes. Photo documentation with standard digital imaging.

Kanchipuram Dist.

Chettinad Super Speciality Hospital

DEPARTMENT OF CARDIOLOGY CATHLAB REPORT

CORONARY ANGIOGRAM REPORT

Dr. PRADEEP G NAYAR MD, DNB (Cardio), MNAMS, FRCP (G), FRCP (E), FACC, FSCAI
Professor & Director – Department of Cardiology.

Dr. C. ARUMUGAM, MD, DM. Consultant Cardiologist.
Dr. M. CHOKKALINGAM, MD DNB Consultant Cardiologist
Dr. N. GANESH MD, DM., Consultant Cardiologist.

Pt. Name: MRS. VALLI.N	Age/Sex:42Yrs/F	Date: 10.06.2015
Consultant: DR. C. ARUMUGAM.	Angio no:15065193	Hos.No:9000177974

Clinical Diagnosis: CAD – ACS / STEMI / Acute AWMI / HTN /Moderate LV dysfunction.

Procedure done : CAG.

Done by Doctor : DR. C.ARUMUGAM.

Technologist : Mr. G. Nagarajan/C.A.Sathishkumar. Scrub Nurse: Mrs.Mekala.

Approach	RFA- 7F Sheath.	Heart Rate	68Bpm	Spo2	94%
Catheter	6F JL & JR3.5.	Pressure	132 /81/101mmHg		
Fluorotime	1.31minutes.	Contrast	Visipaque(Non-Ionic) –30 ml		
Drugs	Inj. Heparin 2500 units,				

Coronary Angiographic findings:

LMCA	Normal
LAD	Ostioproximal LAD has 100% occlusion.
Ramus	Is a large vessel and has mild ostial disease.
LCX	Non -Dominant vessel and normal. OMs are normal.
RCA	Dominant vessel and normal. PDA and PLB are normal.

Impression : CAD –Single vessel disease.

Advice : Primary PCI to LAD.

Dr.C.ARUMUGAM MD, DM, (Cardio)
Consultant - Cardiologist.

Dr.Kamakshi Memorial Hospital

No.1,Radial Road,Pallikarani
Chennai-601302

CORONARY ANGIOGRAM:

LMCA: LMCA is normal.

LAD: LAD is a type III vessel.

Mid LAD has long segment 90% stenosis.

Diagonals and Septals are normal.

LCX: LCX is anatomically non-dominant vessel.

OM1 and OM2 are normal.

OM3 has Ostial 80% stenosis.

RCA: RCA is anatomically non-dominant vessel.

Mid RCA has long segment 60% stenosis.

PDA and PLV are normal.

***IMPRESSION*: ATHEROSCLEROTIC CORONARY ARTERT DISEASE.**

DOUBLE VESSEL DISEASE.

RECOMMENDATION: PTCA STENTING TO LAD.

DR.S.RAMESH.MD.DM
INTERVENTIONAL CARDIOLOGIST.

Dr.Kamakshi Memorial Hospital

No 1,Radial Road,Pallikaranai
Chennai-601302

CORONARY ANGIOGRAM REPORT

PATIENT INFORMATION

Patient Name	: MR.MOHAN RAJ.S.
Study Date	: 03/11/2014
MRN	: 11229
Study Number	: 20141103l1229
Age	: 57 YEARS
Gender	:MALE

PROCEDURE: CORONARY ANGIOGRAM:

Medication Events

Start	Stop	Medication	Route	Amount	Units	Comments
		Inj Efeorlin	I V		100 mg	
		Inj Avil	I V		22.75 mg	
		Inj Heparin	I V		2.500 units	
		Inj NTG	I A		100 mics	
		Inj Xylocard	I A		21.3 mg	
		Inj Dilzem	I A		5 mg	

Staff

CARDIOLOGIST	DR. S.RAMESH.MD.,DM
TECHNOLOGIST	MR. M.SARAVANAN.
PHYSICIAN ASSISTANT	MS. K.SANGAVI.
SCRUB NURSE	MS. UMA MAHESWARI.

RIGHT RADIAL ARTERY – 6 F.

Contrast Summary

Contrast	Total (ml)
XENETIX – 350 MG	60ML.

Institute of Cardiology
Govt. General Hospital
Chennai-03.

Prof. M.SOMASUNDARAM, MD.,DM.
CARDIOLOGY – UNIT III

DR.K.MEENAKSHI, MD, DM. ADDL PROF **DR.C.ELANGOVAN, MD,DM.,ASST. PROF**
DR.KARUNAKARAN,M.D.,

CORONARY ANGIOGRAM REPORT

NAME: SUDALAIKANNAN AGE: 48/M MRD NO: 67074
DATE OF CAG: 30-07-2011 CAG NO:571

DIAGNOSIS: OLD IWMI/EA CLASS II

		S M D
Approach	: Rt.RADIAL	
Catheters used	: TIGER catheter	Aortic Pressure: 140/106/90
Contrast medium	: Omnipaque	
Heparin	: 2500 u IV	

CORONARY ANGIOGRAM (MULTIPLE ANGULATED VIEWS)

- **LMCA** - NORMAL.
- **LAD** - MID LAD HAS 90-99% LONG LESION AFTER D2. TIMI 2 FLOW DISTALLY.D1 LARGER WITH 70% LESION. D2 HAS 50% LESION.
- **LCX** - CONTINUES AS LARGE OM 3 AND HAS 99% STENOSIS AT ITS PROX PART
- **RCA** - PROX RCA HAS 90% STENOSIS .MID RCA HAS 80% LESION.. DISTAL RCA, PDA GRAFTABLE.
- **LIMA** - NORMAL.

ANGIOGRAPHIC DIAGNOSIS

THREE VESSEL DISEASE

ADVICE:

CABG. LIMA-LAD. SVG – OM3/PDA/ PLB/D1

DR.R.ARUN,DR.M.RAJENDRAN
POST-GRADUATES

ASSISTANT PROFESSOR
PROF. MS UNIT

Dr.Kamakshi Memorial Hospital
No.1,Radial Road,Pallikarani
Chennai 601302

CORONARY ARTERIOGRAPHY;

LMCA;LMCA is normal.

LAD; LAD is type III vessel.

Proximal LAD has 80% stenosis.

Mid and distal LAD are normal (probably recannalised LAD).

LCX: LCX is anatomically non-dominant normal vessel.

OM branches are normal.

RCA; RCA is anatomically dominant vessel.

RCA, RCA branches, PDA and PLV are normal.

IMPRESSION: SINGLE VESSEL CORONARY ARTERY DISEASE.

CRITICAL PROXIMAL LAD LESION.

ADHOC PTCA STENTING TO PROXIMAL LAD:

GUIDING CATHETER: 6F EBU 3.5 MEDTRONIC GUIDING CATHETER.

GUIDE WIRE ; 0.014 J x 180 Cms ASAHI NEO GRAND SLAM PTCA GUIDE WIRE.

ASAHI INTECC
ASAHI NEO'S PTCA GUIDE WIRE
Grand Slam
Catalog No. AG141002
Lot No. 79081-10271
UCC/EAN-128
(01)04547327017381(17)100800(30)1(10)79081-10271

Dr.Kamakshi Memorial Hospital

No.1,Radial Road,Pallikarani
Chennai-601302

CORONARY ANGIOGRAM AND PTCA REPORT

Patient Information

Patient Name	Mr.SEKAR
Study Date	09/02/08
MRN	2750
Study Number	200802092750
Age	54 Years
Gender	Male
Race	Asian

DIAGNOSIS:RECENT AWMI(THROMBOLYSED).

Medication Events

Start	Stop	Medication	Route	Amount	Units	Comments
		Inj Efcorlin	I V		100 mg	
		Inj Avil	I V		22.75 mg	
		Inj Heparin	I V		5.000 units	
		Inj NTG	I A		100 mics	
		Inj Xylocard	I A		21.3 mg	
		Inj Dilzem	I A		5 mg	

Staff

REF.CONSULTANT	DR.K.R.SRINIVASAN		
CARDIOLOGIST	DR.P.THIRUMALAI.MD.,DM.		
TECHNOLOGIST	Mr. M.SARAVANAN		
PHYSICIAN ASSISTANT	Ms. UMA MAHESHWARI		
SCRUB NURSE	SIS.DHANAPANDIAMMAL		

RIGHT RADIAL ARTERY – 6F.

Contrast Summary

OPTIRAY	Total (ml)
	200ML.